EXHIBIT 57

precocity

A GENERATIONAL COMPANY

Expert Report of Brandon Ward Regarding Match.com's Online Subscription Cancelation Flow

January 13, 2023

I. QUALIFICATIONS

1. I am the Chief Experience Officer (CXO) and Senior Director of User Experience at Precocity, LLC, located in Dallas, TX. I am also the Chief Experience Officer for iMpact Utah in Lindon, UT. I am an instructor for the Continuing and Professional Education (CAPE) program at Southern Methodist University in Dallas, TX, where I teach principles and practices of user experience (known in the industry as "UX") and service design relating to websites, online flows, and other research and design-related activities.

2. I received my M.S. in Telecommunications from Indiana University, Bloomington through the Masters in Immersive Mediated Environments program in 2004. My focus of study was interactive media design, including sound and music. I received multiple B.A.s in Vocal Performance, Music Theory and Composition, and Theatre from the College of Idaho where I graduated Cum Laude in 2000.

3. I am the co-founder of the Dallas chapter of the Service Design Network. I speak professionally at conferences around the United States on topics of design and user experience. From 2000 to the present, I have served as a designer and design leader both in-house and with agencies. A true and correct copy of my Curriculum Vitae (CV) is attached as Appendix A.

4. I am an independent consultant on several matters regarding usability and experience design through Precocity, LLC, and Nonlinear Media, LLC. A list of representative clients is attached as Appendix B.

5. I have written numerous articles and delivered numerous talks (listed on my website brandonebward.com), in addition to many expert analyses and usability reports, and I have expertise in website information architecture, usability, and design.

6. I have conducted usability and user research studies on several occasions in the past, including:

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a. **Toyota**—I led the introduction of usability testing of digital products/projects at Toyota Motors North America (TMNA) and Toyota Connected (TC). From 2017 to 2020, I led the research and testing for Toyota's next-generation in-dash navigation and entertainment systems. My team and I spent hundreds of hours in moderated tests with users using functional prototypes to gather user feedback, sentiment analysis, and usability metrics around Toyota's in-dash software. We introduced usability testing more broadly to Toyota, revolutionizing how they think about and build software products.

b. **US Air Force**—I led the research and study of officer training programs, technology, and methodology at the Sheppard Air Force base in Wichita Falls, TX. My team and I observed and interviewed students, teachers, and staff in and out of the classroom. We reviewed current hard and software platforms, tools, assets, and applications. We presented our findings and recommendations to the base commanding officers.

c. **Love's Travel Stops**—I led the research team in the production of a comprehensive journey map and service blueprint for Love's tire care and mechanics' service. We performed live intercepts at Love's travel stops of Love's customers (primarily truck drivers) and performed onsite one-on-one interviews to understand their experiences, thoughts, feelings, and actions when engaged with Love's services. We then went onsite to Love's headquarters and performed onsite one-on-one interviews with Love's staff to understand the back-of-house experiences, thoughts, feelings, actions, and technologies when engaged with Love's customers using their services. Over 70 interviews were conducted, analyzed, and mapped. We presented our findings to the Love's executive leadership team including hundreds of recommendations that could improve their staff and customer experiences.

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7. For my work on this case, I am being compensated at my customary rate of $275 per hour. I was

    assisted in this assignment by my team at Precocity, LLC. Their billing rates are $200 per hour. Neither

    my compensation nor that of Precocity, LLC is dependent upon my opinions or the outcome of this

    usability study or case.

II. ASSIGNMENT

8. I was retained by Sidley Austin LLP to use my expertise in website design and user experience to

    evaluate and offer opinions about Match.com's online subscription cancelation flow. I understand that,

    in this case, the Federal Trade Commission (FTC) has alleged that Match.com's online cancelation flow is

    not a "simple" method for Match.com subscribers to cancel recurring payment subscription services. I

    was not asked to opine on other methods Match.com offers for subscribers to cancel and I offer no

    opinions about those other methods. My assignment was to assess whether Match.com's online

    subscription cancelation flow is, in fact, "not simple," as the phrase may be understood within the

    scientific field of user experience and website usability, and mindful of the published FTC guidance

    about the meaning of that phrase.

III. APPROACH AND METHODOLOGY

9. The Restore Online Shoppers' Confidence Act (ROSCA) nowhere defines the term "simple." I am

    informed by counsel for Match there are no reported decisions by the courts that provide parameters

    for assessing whether an online cancelation flow satisfies ROSCA's basic requirement. The FTC itself has

    offered little public guidance on this subject. In its "Enforcement Policy Statement Regarding Negative

    Option Marketing" (released in 2021), the FTC has stated that to meet the simplicity standard, "negative

    option sellers should provide cancelation mechanisms that are at least as easy to use as the method the

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consumer used to initiate the negative option feature," and that negative option sellers "should not subject consumers to new offers or similar attempts to save the negative option arrangement that impose unreasonable delays on consumers' cancelation efforts." But the FTC's enforcement policy further explains that "[w]hile a request to consider an offer or discount would not amount to an unreasonable delay, multiple requests for a consumer to listen to additional offers, lengthy pitches, or ignoring a consumer's request to decline further offers could amount to an unreasonable delay." In a separate statement, Commissioner Phillips noted this guidance "explains how the Commission interprets" the term "simple," permitting "a cancelation mechanism that is as easy to accomplish as signing up, whilst preserving the opportunity for a business to make an offer to induce a consumer to stay."

10. With this guidance in mind, I set out to assess the Match.com cancelation flow against this stated standard. I used methodologies commonly accepted in the user experience field to evaluate: (a) whether the flow is consistent with, or better than, industry standards for online cancelation flows; (b) whether subscribers can effectively accomplish the objective of the flow; (c) whether any save offers or surveys embedded in the Match.com flow cause unreasonable delay in a subscriber's cancelation effort; and (d) whether any aspect of the flow appeared designed to cause subscribers undue or unreasonable difficulty in canceling.

11. Experts in the field of usability generally do not use the standard of "simple." Rather, we use the standards of "clear" (meaning can the flow be understood by reasonable users) and "effective" (meaning is the flow designed in a reasonable way that users can accomplish the task without undue burden). For the purposes of my study and conclusions contained in this Report and as I may testify, the phrases "clear and effective" and "simple" can be used interchangeably.

12. In performing this assignment, I used the same methodologies I use in my expert consulting and academic work.

13. First, I conducted what is commonly referred to as a "heuristic" analysis of Match.com's online cancelation flow on a desktop/laptop computer and assessed whether the flow was usable and simple, based on standard principles of web usability and design.

14. To conduct this heuristic analysis, I relied on two standards commonly used in the field of website usability: Jakob Nielsen's Ten Heuristics of Usability and Nielsen Norman Group's Five Quality Components. Nielsen's usability heuristics and quality components are used to evaluate "how easy user interfaces are to use." ("Usability 101: Introduction to Usability" n.d.) These Nielsen heuristics are the gold standard in evaluating web usability and design. Next, I used Nielsen's five quality components. These quality components are similarly used to identify whether an interface is usable and simple ("Usability 101: Introduction to Usability" n.d.).

15. Second, I evaluated the Match.com cancelation flow against standard and best practices for website design.

16. Third, I designed and conducted an empirical usability study, which tested whether the Match.com cancelation flow is clear and effective. This empirical study instructed potential Match.com subscribers to sign up for a Match.com subscription which had a negative option feature and then cancel the subscription using Match.com's online cancelation flow. I analyzed whether participants were able to successfully cancel, how long it took them to cancel, and their perceptions of the simplicity or difficulty of the cancelation process.

17. Finally, I analyzed Match.com subscriber data to identify whether subscribers were able to cancel and determine if they had difficulty doing so. This included an analysis of and conclusions regarding (a) the percentage of Match.com subscribers who successfully canceled subscriptions, having demonstrably

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acted in a manner indicating a desire to potentially cancel; and (b) the time it took to cancel. I analyzed whether this real-world data was consistent with my heuristic analysis and usability study results.

18. I have reported the opinions I have reached from these analyses and the reasons and bases for my opinions in this report and appendices.

IV. SUMMARY OF OPINIONS

19. In my professional, expert opinion, the Match.com online cancelation flow is clear and effective. It can be accessed using industry-standard icons, has clear labels, and follows a logical, short path to a conclusion. It is easy to complete. The first thing I did when I was retained for this case was to subscribe to Match.com and then try to cancel my subscription online. I expected, based on the FTC's allegations, that this cancelation process would be difficult, time-consuming, and/or confusing. But this was not what I found. Instead, I found Match.com's cancelation process is standard for subscription cancelation processes with which I am, in my professional capacity, familiar. Indeed, the processes used are similar to many online subscription cancelation processes across industries and areas. I identified nothing unusual, unique, or difficult with this process.

20. As explained in Section VI, from my heuristic analysis, I concluded Match.com's cancelation flow meets the applicable Nielsen usability (and simplicity) heuristics, and it satisfies Nielsen's 5 quality components of usability. Thus, the Match.com online cancelation process meets generally accepted standards of usability in the field and contains features common to other subscription websites.

21. In Section VII, I describe the results of the empirical usability study. This study shows:

- **Objectively, it was easy for participants to cancel**

  - **91.5%** of participants who signed up were able to cancel successfully via the online cancelation flow. Any score above 80% in a study like this would demonstrate usability and

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simplicity. Match.com's score, which was above 90%, proves its cancelation process is simple and easy to use.

- It took participants an average of **74 seconds** to cancel online on Match.com. This length of time is reasonable for a cancelation task, again indicating the cancelation process is simple and easy to use.

- **Participants were able to cancel more easily than they were able to sign up**

  - Participants were able to cancel much faster than they were able to sign up – average cancelation was **16.3% of the time** it took to sign up or **6.1 times faster.**

- **Subjectively, participants believed cancelation was simple (and simpler than signing up)**

  - **84.7%** of participants thought canceling was at least as simple as signing up

  - **88.3%** of participants thought canceling was simple or were at least neutral as to the simplicity/difficulty

- **Match.com received an "A Grade" on a System Usability Score (81.6), which makes it among the top 10% of all websites in terms of usability.**

22. Third, my analysis of Match.com's actual user data indicates the cancelation process is simple and is consistent with the results from my usability study: Specifically:

- Match.com's subscriber data shows that over 95% of subscribers who clicked "Cancel Subscription" either took a save offer (i.e., decided to renew rather than cancel) or successfully canceled via the online cancelation flow. The remaining 5% could certainly have changed their minds about

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cancelation midstream or may have never intended to cancel, so this "success rate" is conservative.

A 95% success rate indicates the cancelation process is simple and easy to use.

- Match.com's subscriber data shows the median time for subscribers to complete cancelation, from the time they select "Cancel Subscription," is, on average, 44 seconds—more than 4 times faster than the average time it takes to complete only the Match.com subscription purchase process (excluding registration time, even though registration is necessary before purchasing a subscription, making this analysis conservative). The speed with which subscribers can complete the cancelation process, and the fact that the cancelation process is quicker than the subscription process, is more evidence that Match.com's online cancelation process is simple.

V. BACKGROUND ON THE CANCELATION PROCESS

23. In this Section, I describe the Match.com online cancelation flow and comment on its components from a website design and usability perspective.

24. There are (at least) two ways for Match.com subscribers to arrive at the online cancelation flow.[1]

25. The first way to reach the online cancelation flow is from the Match.com "Home Page." Each page/step to cancel from the Home Page is described in more detail below:

Home Page

26. If a Match.com subscriber is on the Home Page and wishes to cancel, it is easy for the subscriber to find the beginning of the online cancelation process.
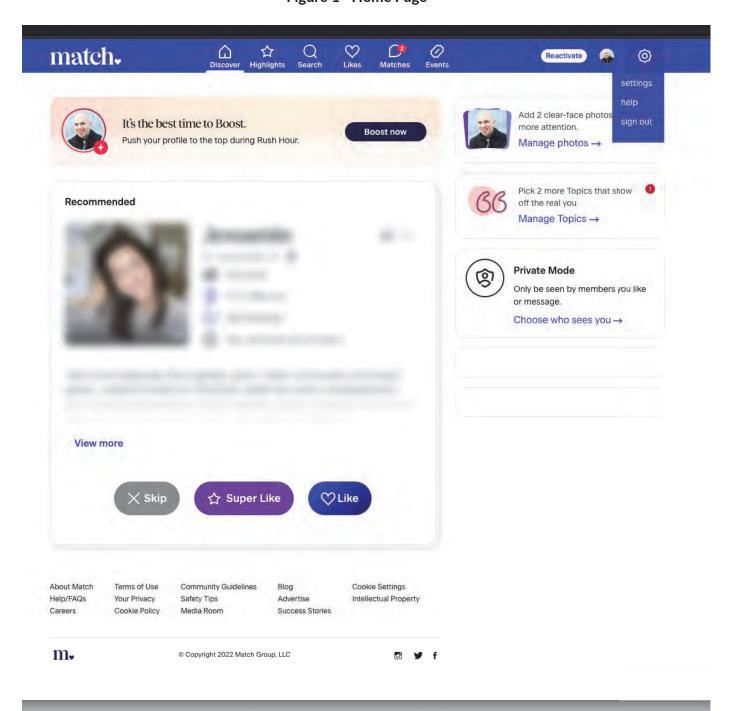
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[1] This report and my analysis are limited to Match.com's online cancelation flow. I understand that Match.com offers other methods of cancelation, but I have not assessed those other methods because my expertise is in website usability and design.

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27. The first thing a subscriber has to do, from any page, is to click the settings icon (the gear icon) on the upper right-hand side of the screen and then click "settings."

28. Many companies similarly put online cancelation flows on their settings pages. Thus, consumers are likely to expect the cancelation flow to be found on that page. Similarly, it is common to put the link to the settings page at the top right of the home page and to use a "gear" icon to indicate settings. Both are best practices, at least since 1995 as demonstrated in the Windows 95 menu in Figure 0 below.

29. Listed below are several websites that similarly place access to the cancelation flow on the settings page:

   i.   LinkedIn—Subscription information is in Settings, which is at the top of the page, the third option from the right.

   ii.   WorldatWork—The profile, which includes membership status, is on the right side of the navigation.

   iii.   Canva.com—The settings icon is the third icon from the right in the navigation menu. Subscription information is within the settings.

   iv.   Dropbox.com—The profile icon is in the upper right corner of the screen. Subscription status is nestled under settings and plan in the dropdown.

   v.   NYTimes.com—The account is in the upper right-hand corner of the page, and subscription information is within the Account dropdown.

   vi.   Netflix—Profile is in the upper right-hand corner of the page, and Account information (including subscription information) is within the dropdown.

30. Match.com uses a gear icon for subscribers to access the Settings page. As described in more detail below, a gear icon is commonly used to represent Settings and has been since at least 1995, as observed in Windows 95 and potentially earlier. Some examples include other subscription and profile sites, such as Patreon, Facebook, YouTube, Google apps, Yahoo mail, iPhone, Android, and many others.

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Figure 0—Gear Settings Icon 1995
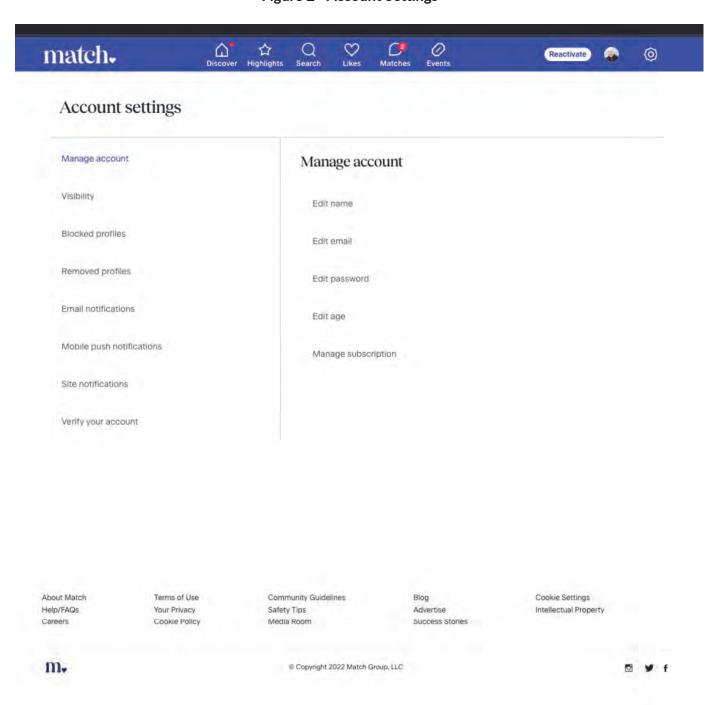
Figure 1—Home Page

31. Once a subscriber selects Settings, Match.com takes the subscriber to the "Manage Account" section of the Settings menu by default.[2] To cancel from that screen, the subscriber must select "Manage subscription," one of the five options on the "Manage Account" page.

32. It is obvious for any subscriber that wants to cancel their subscription that "Manage subscription" is the option to click. Match.com does not hide or obfuscate the Manage subscription link. Rather it has the same prominence as any other settings the subscriber may want to access. The location of the Manage subscription link (within Account Settings) makes sense and is not concealed or distracted from by other, more prominent user interface features or calls to action asking the subscriber to take any particular action.[3]

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[2] In previous versions of the Settings page, "Manage Subscription" was located on the lefthand side of the page rather than as a submenu within the "Manage Account" section. "Manage Subscription" remained visible on the page at which a subscriber arrived after selecting Settings. This change does not affect my usability opinion.

[3] I understand the layout of and language on the Settings page has varied somewhat since September 2014. For example, the language to navigate to the Subscription Management page has changed from "Change/Cancel Membership" to "Manage/Cancel Subscription" to "Manage Subscription." From a usability perspective, all of these options are acceptable alternatives, and in each version, a subscriber likely will recognize that canceling a subscription is a type of management, especially because the cancelation flow is unlikely to be located within any of the other Settings options. To the extent there is any confusion, a subscriber can visit the Help page, which, as described below, contains a "Canceling" article that links the subscriber to the flow, without navigating through the Settings options.
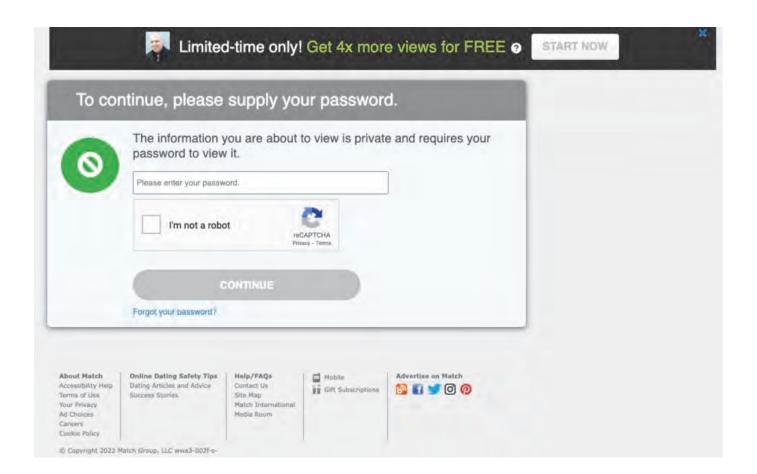
Figure 2—Account Settings

33. Once a subscriber clicks on "Manage subscription", they are prompted: "To continue, please supply your password." It is clear that if the subscriber wants to continue to cancel, they must enter their password and complete the reCAPTCHA (to prove the subscriber is not a robot).

34. I observed that reauthentication was only required once per log-in session. As far as I could ascertain sessions don't expire as long as the subscriber has accepted the appropriate cookies and doesn't log out. Meaning a subscriber could navigate away from the cancelation flow, then return later within the same session without having to reauthenticate. This reauthentication is common for platforms dealing with sensitive and financial data. Microsoft Windows 10 defaults to this setting. When an Apple macOS system is encrypted (called FileVault), it too requires the user to reauthenticate when booting up.

35. It is reasonable for Match.com to protect unauthorized or compromised system access to a user's billing and account information. Similar security checks can be found across many websites, as described in more detail below, particularly if a customer is attempting to reach personal account or billing information or make changes to their subscription. Facebook, a site with roughly 2.9 billion monthly users (Dean 2022) recommends reauthentication to their application developers as a method to circumvent hacking and loss of private data. "Re-authentication enables your app to confirm a person's identity even if it was verified previously. Facebook Login lets your app ask a person to re-enter their Facebook password at any time. You can use this to prevent cases where a user leaves a device logged in or where a third-party hijacks someone's session with your app." (Facebook n.d.) These checks ensure that only an authorized user can make changes to a subscription. This measure also helps to ensure that the subscriber doesn't make the change by accident, an issue that can arise when major changes can be effected with only one or two clicks.

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36. Should a subscriber forget their password, a standard Forgot Password flow is provided, as depicted in

Appendix F. I used this flow and it is virtually the same as every website requiring login, including every

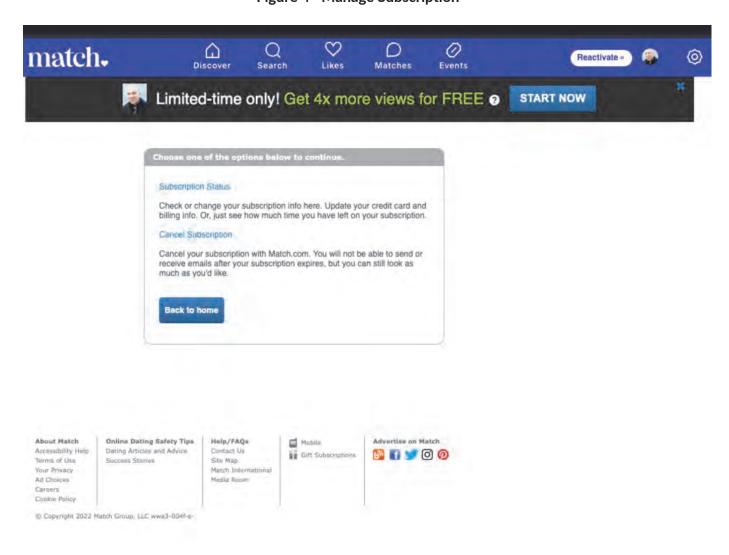website I've ever designed.

Figure 3—Reauthorization

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Manage Subscription Page

37. Once the subscriber completes the security check, they reach the Manage Subscription screen. This screen only has two options: Subscription Status and Cancel Subscription. It is common to group Cancel Subscription with other Manage Subscription options, such as checking Subscription Status. Both options are clickable links (as shown by their blue color), which makes the title stand out. As indicated by research on the spotted pattern of screen reading,[4] the subscriber is likely to notice Subscription Status, Cancel Subscription, and Back to Home before reading any of the text.

38. Both of the links use plain, descriptive language, which makes the meaning of a link or button (i.e., what will happen if a user clicks on it) clear. If a subscriber wants to know what their subscription status is, they can click that button. But if a subscriber wants to cancel, they can click the "Cancel Subscription" button. Match.com could hardly make it more clear or simple to cancel.

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[4] Spotted Patterns are typically used when particular text is designed to stand out, and when the items that stand out resemble a word the user looks for to accomplish the current task. Thus, a user can accomplish the task without reading all of the text on the page if desired or can go back and read the text for additional information if necessary. "Text Scanning Patterns: Eyetracking Evidence." August 25, 2019. https://www.nngroup.com/articles/text-scanning-patterns-eyetracking/.

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Figure 4—Manage Subscription
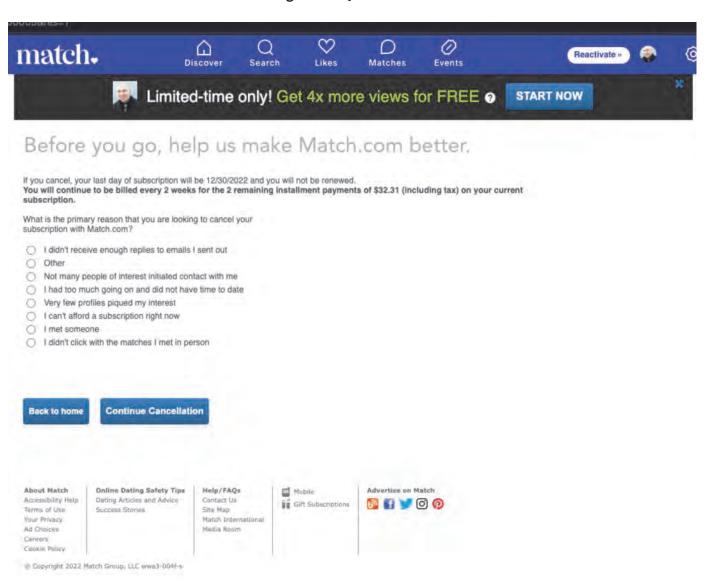
39. After the subscriber clicks Cancel Subscription, they have entered the cancelation flow. The language on the first page makes clear the subscriber has not yet completed the cancelation process. The heading is "Before you go" (implying the subscriber has not yet "left"), tells the subscriber the last day of their subscription "***if*** [they] cancel," and presents an optional survey question, asking the subscriber why they "***are looking*** to cancel" their subscription. (emphasis added). The survey has multiple choice options indicated by radio buttons.[5] Depending on which option (if any) the subscriber chooses, they may be presented with up to two additional follow-up questions on the same screen, although subscribers may be presented only with the single question on this page.

40. Below the question(s) are two buttons: Back to Home or Continue Cancelation. These two options have the same color and are in the same font. Both buttons also appear to be automatically sized based on the width of the text, with equal padding between the text and the edge of the button. Each of the buttons has a label that is clear and descriptive (either Back to Home or Continue Cancelation). If a subscriber wants to continue to cancel they can click the "Continue Cancelation" button.

41. The language throughout the page (including "Before you go," asking why the subscriber is "looking to cancel," and identifying the last day of subscription "if you cancel") and the "Continue Cancelation" option make it clear that the cancelation has not yet been completed. The survey question itself is important from a business perspective because it gives Match.com important information about its subscribers' experiences and whether improvements can or should be made. A brief survey such as this is quite common to encounter during the cancelation process. Companies often like to gather feedback

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[5] Radio buttons are common tools that allow a user to select one item out of a set of predefined options, meaning the user need not type or engage beyond a simple click.

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at various stages to improve their members' experience, and a subscriber wishing to move through the process quickly could simply select answers as fast as possible (or not select answers at all) and move on within moments. Additionally, surveys asking for cancelation reasons are particularly important for websites like Match.com, where a subscriber might cancel because the service worked perfectly for them (by allowing them to find a match), or because the service worked poorly. It is helpful for a service like Match.com to have that information so it can make any necessary changes to improve the service. Presenting the survey after confirming the cancelation would likely decrease response rates and therefore make it more difficult for Match.com to improve its services for consumers.
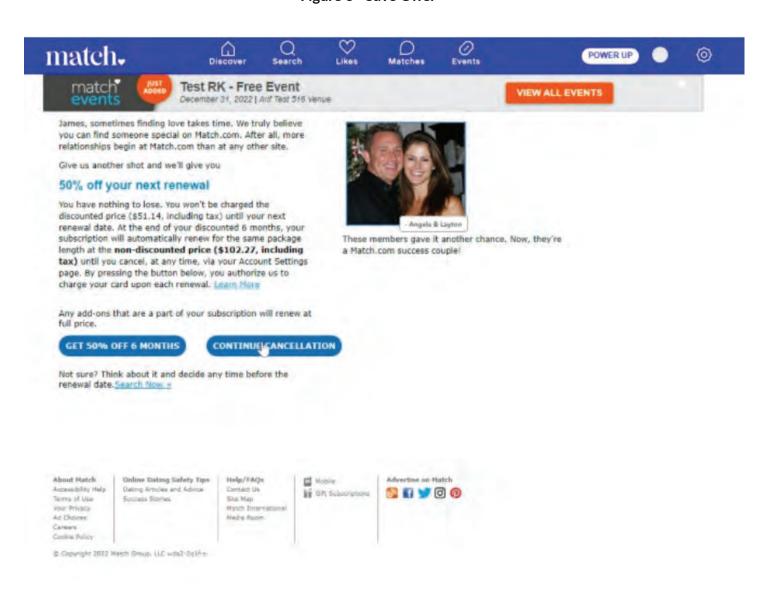
Figure 5—Question 1

42. Depending on a variety of factors (such as the reason for cancelation and subscription history), a subscriber may be presented with a "save offer" after the first survey page. A "save offer" is an offer to renew the subscription (rather than cancel it) at a discounted price (e.g., 50% off the next renewal, or 3 months for the price of 1). Save offers are common in subscription service cancelation flows and are beneficial to consumers because they allow consumers to continue the service at a discounted rate if they desire to do so. Although the precise language has varied from September 2014 to the present, generally, the page presents the offer and then gives the subscriber two options: accepting the offer or continuing with the cancelation. Depending on the version of the flow, to decline the offer, the subscriber selects either "No thanks, I want to resign", "Continue", or "Continue Cancelation." The current version uses the "Continue Cancelation" verbiage. In each version, the choice is clear: accept the save offer by clicking the button describing the offer (e.g., "Get 3 More Months") or click the other button, declining the offer.

Figure 6—Save Offer[6]

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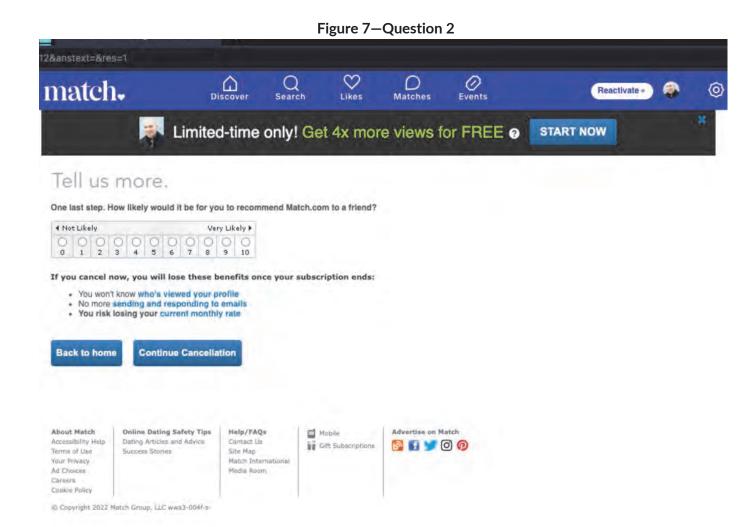
43. The final screen before cancelation confirmation is a survey page with the heading "Tell us more," asking the subscriber how likely they are to recommend Match.com to a friend (i.e., a Net Promoter Score survey, a common survey to gauge customer satisfaction).[7] The page also lists some of the benefits that the subscriber will lose by canceling ("If you cancel now, you will lose these benefits once your subscription ends...."). Reminding subscribers of benefits they will lose if they cancel is common on other subscription websites (e.g., Amazon Prime, LinkedIn).

44. Just like the first survey page, the second survey page contains two buttons: Back to Home and Continue Cancelation. Also just as with the first survey page, the language and the buttons on this page make it clear that the cancelation has not yet been completed, as the page warns "*If* you cancel now," you *will* lose benefits (emphasis added), and the subscriber is given the option to "*Continue* Cancelation." (emphasis added). Additionally, the current version of the flow warns that this page is "One last step," making clear that there is still more to be done. A brief survey such as this is, again, quite common to encounter during the cancelation process and serves a business function. A subscriber wishing to move through the process quickly could simply select answers as fast as possible (or not select answers at all) and move on within moments.

45. There are a few important things to note about these surveys and potential save offers. First, they are quick and simple to complete (3 questions can be done in 10 seconds). Thus, they do not amount to an "unreasonable delay" that would be prohibited under the FTC guidance. Nor does Match.com use these

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[7] I understand that before some point in 2017, this page also contained a text box asking subscribers to answer the following question: "In your own words, how can we make finding love easier?" MATCHFTC672298. Entering text in the box was optional (just as answering any of the other survey questions is optional), and generally, it is beneficial to allow users to express opinions about the website. In my opinion, including the text box did not have an adverse impact on the cancelation flow's usability or simplicity.
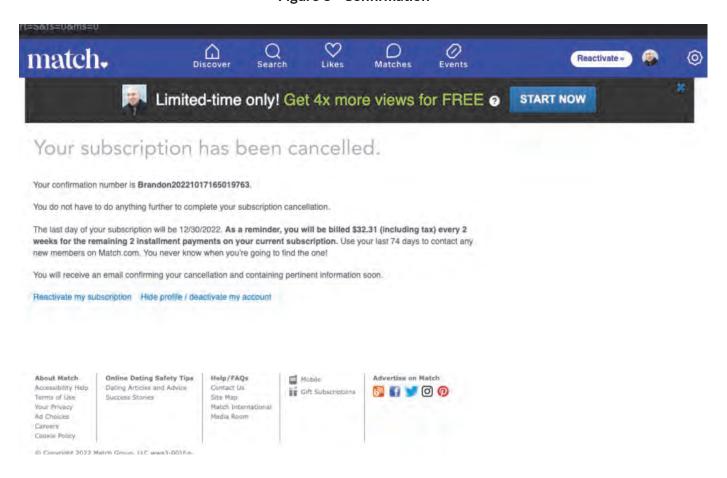
surveys to confuse people into thinking they have canceled when they have not canceled. As explained

above, Match.com uses clear language and buttons indicating to subscribers that they have not yet

canceled until they have completed these surveys and questions. As described above, answers to these

types of survey questions are particularly important for a service like Match.com, where cancelation

does not necessarily reflect unhappiness with the service.

Figure 7—Question 2

46. The final screen in the cancelation flow is a cancelation confirmation page informing the subscriber the cancelation was successful and is now complete. The page states in prominent text near the top of the screen the cancelation is complete. The additional text provides more detail about what the subscriber can expect now they have canceled. It is common to provide a confirmation screen and sometimes a confirmation number as the final step of the cancelation process, so it is reasonable that a subscriber will understand they have successfully canceled if and only if they reach this page. Subscribers also receive an email confirming the cancelation, which is also customary when a subscriber has successfully canceled.

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Figure 8—Confirmation

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47. Overall, Match.com's cancelation process is easy to follow and use. At each step, it is clear what the subscriber must do to cancel online.

48. Match.com provides other ways to reach the cancelation page as well, for example, through the Help/FAQ page. The steps to cancel via this avenue, starting from the Home page, are described below:

1. Access the Help/FAQs page, either by selecting the "Help/FAQs" link at the bottom of nearly every Match.com page (including the Home page), by selecting "Help" within the Settings dropdown menu, or even by conducting an Internet search (e.g., via Google) for "Match.com help." A link to the Help/FAQs page is commonly located in the footer of a website, such as:

    1. LinkedIn – A "Help Center" link is near the bottom righthand corner of the Home page.

    2. Netflix – A "Help Center" link is along the bottom of the Home page

    3. NYTimes.com – A "Help" link is along the bottom of each page

2. The Help/FAQs page can be used in one of two ways: (1) using the search box, or (2) filtering by topic.

    i. If the subscriber chooses to use the search box, they can search for "Cancel" (among other terms listed below) in the search box text entry field, which is prominently displayed in the middle of the screen. When a subscriber begins typing these terms the search box suggests related topics, e.g., "cancel" gets you "Canceling," and I found at least twelve various phrases that could get you to the same cancelation-related content. Alternatively, a subscriber can type "cancel" or a variation thereof and click the magnifying glass (a typical icon to represent "search") to run the search. The first search result is for a "Canceling" article, described in more detail below. These are the words/phrases I found that lead to the cancelation-related content:

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1. Cancel

2. Cancellation

3. End

4. Manage

5. Manage account

6. Manage subscription

7. Auto renewal

8. Membership

9. Deactivate

10. Free trial

11. Turn off

12. Subscription Status

ii. If the subscriber chooses to filter by Help topic, they can select the "Manage My Subscription" help option on the Help/FAQs page, which is the topic most likely to contain information about canceling subscriptions. After choosing that filter, the page shows six articles, plus an option to "See all 7 articles." After the subscriber selects "See all 7 articles," the cancelation article option is displayed, which the subscriber can click to go to the relevant article.

3. Both of the paths described above, which are depicted in Appendix G, take the subscriber to the "Canceling" article that describes how to cancel a subscription and other various Match.com features, using a variety of methods. The first sentence of the article contains a "Manage Subscription" link that takes the subscriber to the same page as would clicking "Manage Subscription" from the Settings page, such that the subscriber is taken directly to

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reauthentication page (Figure 3 above). The Manage Subscription link in the Canceling article stands out as a link because it is underlined and the cursor turns into a hand when hovered over the link text.

4. The remainder of the cancelation flow from this point is identical to the flow if the subscriber enters via the Settings method described above.

49. A video of the cancelation process is being provided as Appendix J of this Report.

50. I also compared Match.com's cancelation process to the cancelation process for other major subscription websites. As indicated by the results of my usability study described in the next Section, most consumers have had other online subscription services and thus are familiar with standard cancelation processes. As the chart below shows, many of the features of Match.com's cancelation process are standard and used on many other websites.

	One-Step To Cancel	Cancel @ Account	Instructions in Help	Survey included	Retention Prompt Observed[8]	Reauthentication Required	5+ Steps to Cancel
Match.com	No	Yes	Yes	Yes	Yes	Yes	Yes
Amazon Prime	No	Yes	Yes	Yes	Yes	No	Yes
Apple iCloud	No	Yes	Yes	No	Yes	Yes	Yes
Disney+	No	Yes	Yes	Yes	Yes	No	Yes
eHarmony	No	Yes	Yes	Yes	No	Yes	Yes
Intuit Quickbooks	No	Yes	Yes	Yes	No	No	Yes
LastPass	No	Yes	Yes	No	No	No	No
LinkedIn Premium	No	Yes	Yes	Yes	Yes	No	Yes
Netflix	No	Yes	Yes	Yes	No	No	No
New York Times	No	Yes	No	Yes	Yes	No	Yes
Spotify	No	Yes	Yes	Yes	Yes	No	Yes

Screen captures for these flows are provided in Appendix I.

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[8] Based on my observations. May depend on the subscriber and the circumstances.

VI. HEURISTIC ANALYSIS

51. This Section describes the heuristic analysis I conducted. I first identify each heuristic (in bold and quotes) and then analyze whether Match.com's cancelation process meets that heuristic.

A.   Heuristic 1: Visibility of system status

"The system should always keep users informed about what is going on, through appropriate feedback within reasonable time."

52. Match.com's cancelation flow satisfies this heuristic. As indicated in the screenshots and page descriptions above, at each step of the cancelation process, from the Settings screen, through to the end of the cancelation process, Match.com uses titles and text that clearly and succinctly describe what page the subscriber is on and what the subscriber is expected to do to proceed to the next step. The labels are clear and concise and use ordinary syntax.

53. I understand the FTC alleges the cancelation flow contains "misleading text" that causes subscribers to "think the cancelation is complete." FTC's First Amended Responses to MGI Interrogatory No. 2. I disagree that any of the text that the FTC identifies is misleading:

   1. The FTC first contends the "Before you go" heading on the first survey page makes subscribers believe the cancelation is complete. I disagree. In my opinion, "before you go" indicates that the subscriber has not yet canceled. In other words, "before you go" means "before you cancel." In addition, linguistically, the phrase "Before you go" doesn't imply the completion of any task. In every use of the phrase "Before you go...", the context is clear that you haven't yet gone, meaning, you're still here. Other context on the same page reinforces the cancelation is not yet

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complete. The first words after the "before you go" heading read "If you cancel...". (See Figure 5).

Additionally, the survey question asks why "you are looking to cancel," not "why did you cancel." This clearly indicates the subscriber has not yet canceled. Additionally, the navigation buttons on the page—one of which is "Continue cancelation"—indicate the subscriber still must take additional steps to cancel. Thus, I have no concerns from a usability perspective about Match.com's use of the "Before you go" heading.

2. The FTC next claims that "until recently," the save offer was confusing because it was unclear which button a subscriber should push if they want to decline the offer and continue cancelation. Again, I disagree. In all versions of the save offer page (which is only displayed to a subset of canceling subscribers), the two options are clear (either as a button or a hyperlink). One option clearly entails accepting the offer (usually by repeating the offer), and the other option clearly entails declining the offer. What is more, even if a subscriber were confused by the save offer, it is highly unlikely the subscriber was confused about *whether* they canceled.

3. I conclude that through clear language and buttons, Match.com does not deceive subscribers into thinking they canceled before they effectively cancel.

B.   Heuristic 2: Match between system and the real world

"The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order."

54. I have concluded that this heuristic is satisfied. As explained below, Match.com's cancelation flow is written in plain and easy-to-understand English, at a 6th-grade reading level. The flow follows a natural and logical progression to cancelation, which is consistent with many web cancelation processes.

55. To analyze this heuristic, I used the Flesch Reading Ease Score (FRES) and a Flesch-Kincaid Grade Level Score (FKGLS), which are good measures for understandability and readability. (Character Calculator n.d.)

56. "The Flesch reading score is measured on a scale of 0 to 100, with 100 being the easiest to read. A lower score suggests that the language is hard to understand and may be suitable for only professionals." (Character Calculator n.d.)

57. "The Flesch-Kincaid grade level is a scale used to measure the readability level of books. It indicates the number of years of education needed to understand a text." (Character Calculator n.d.)

58. Based upon these scores, the language used in the Match.com cancelation flow has an average FRES of 71.1, which is "Fairly easy to read" and an average FKGLS of 6.06, which is "Easy to Read". These scores put the Match.com cancelation flow at a 6th-grade reading level. These scores indicate the flow meets Nielsen's criteria for heuristic 2, as well as ease of readability for adults.

59. Additionally, the information architecture, or how the content of the site is structured, makes logical sense and matches traditional user mental models for how and where items are located. In this case, canceling your subscription is available on the "Settings" page, which is a common and logical place to include information about account management (and has been for some time). See the chart above identifying other commonly used websites in which cancelation is done through the account settings page. On the Settings page, a subscriber finds the Manage Subscription button, which is a logical place

for the cancel options. Once there, the subscriber finds the Cancel [your] Subscription option, which is

straightforward and clear.

60. Upon selecting that option, the subscriber is presented with a survey question asking why he or she is

canceling. If the subscriber chooses to answer the question, it's just a click of a radio button, or the

subscriber can skip the question entirely. The subscriber may also choose to answer or skip the

following survey question (a Net Promoter Score survey). At that point, Match.com displays a

confirmation screen that the subscriber has successfully canceled. If the subscriber is shown a save

offer, that is also a single page (between the two survey pages) requiring only a single click to accept or

decline. This matches the organization and flows one might expect from other systems on the web.

C.   Heuristic 3: User control and freedom

"Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo."

61. Based on my review, I conclude this heuristic is satisfied. Match.com provides at least two distinct paths

into the cancelation flow—the first flow is through the Settings page, the second via the Help page.

Whether a subscriber knows to go to Settings to manage their settings or they're not sure and they use

the Help flow (which contains at least thirteen different routes to the "Canceling" article (twelve

searches, one FAQ item) describing how to cancel and linking to the flow, as explained above),

subscribers have ample entry points to find what they're looking for.

62. The Settings page also provides a clear entry point into the cancelation flow. Every iteration of the

Settings page has presented the button to reach the cancelation flow (whether "Manage Subscription"

or otherwise) on the first page that the subscriber sees. In the current version, there are eight options

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under Settings. In my testing, as well as in the usability study, Manage Account is the default menu, meaning the Manage Subscription sub-selection is immediately visible. The other seven menu options have no connection to the subscription in any way, though each of those options has as many as nine sub-options or even entire flows (e.g., Account Verification) under them. Manage Account has only five sub-options, each distinct, focused, and clearly labeled. If a subscriber wants to cancel, "manage subscription" is the clear and only choice to proceed (see Figure 9 below). This is true even though none of the options contain the word "Cancel."

Figure 9—Account Settings

63. There are only two options under Manage subscription: Subscription Status and Cancel Subscription.
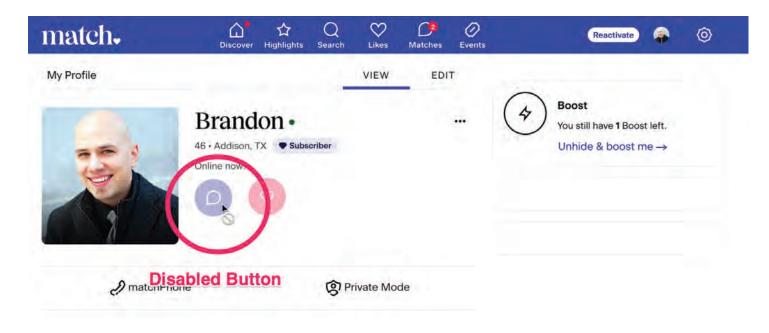
Both are clearly labeled and supported with a descriptive paragraph.

Figure 10—Manage Subscription
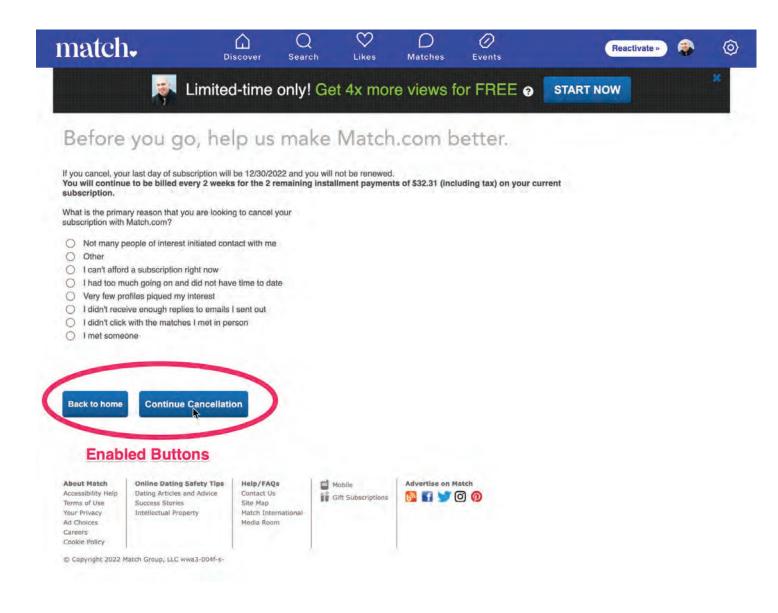
64. As subscribers navigate the Match.com website, if they make a mistake or go down an improper path, it is easy to continue exploring or retrace their steps using the browser back button or resetting to their home page to try again.

65. Once a subscriber finds the cancelation flow, there is a large button clearly and specifically labeled "Back to home" to help them reset should they get lost or decide to stop.

66. Likewise, should the subscriber prefer to continue, there is a large button clearly and specifically labeled "Continue Cancelation" to help them continue the cancelation process.

67. Both Back and Continue buttons are always enabled (as indicated by their solid blue color, used with other solid and bold colors elsewhere on the site), versus grayed-out or disabled buttons (as indicated by lighter or washed-out colors, and even a ban icon indicating it's not a clickable item). These facts are displayed in the figures below.

Figure 11—Match.com Disabled Button Example

App. 775

Figure 12—Enabled Button Example

D.   Heuristic 4: Consistency and standards

"Users should not have to wonder whether different words, situations, or actions mean the same thing.

Follow platform conventions."

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68. The Match.com cancelation flow satisfies this heuristic because it uses consistent and well-understood language, images, and procedures. The location of all controls, both in the primary navigation at the top of the screen and the subsequent page-level navigation controls all follow established patterns of usability and clarity. If a Match.com subscriber has used any other websites requiring login and profile management, they're probably already familiar with the locations and patterns Match.com uses in its cancelation flow because they are all standard and generally accepted (and have been for years), as described in more detail above.

69. The primary way subscribers reach the cancelation flow is through the Settings page. I understand that the FTC has objected to the gear icon as the image for the settings menu. But the gear icon for the Settings menu is a standard and acceptable image. The Settings menu is indicated with the gear icon, which is a type of Toolbox navigation. (Kalbach 2007) The gear icon, like Match.com's other images, is commonplace and found on millions of websites and apps across the web, so subscribers are likely to understand that the gear icon signifies Settings. As mentioned before, the gear icon has been used for Settings as early as 1995 in Windows 95, and countless systems and sites since. Some examples of systems and websites that use the gear icon for settings are:

1. Apple macOS (desktop)

2. Apple iOS (mobile)

3. Microsoft Windows

4. Microsoft Office 365

5. Amazon

6. Gmail

7. YouTube

8. Reddit

9. Twitter

70. A Google Image search for "settings icon" returns almost exclusively the gear icon, which is by far the

most used icon for settings. This is depicted in Figure 13 below.

App. 778

Figure 13—Search results for "settings icon" on images.google.com 11.2.2022

71. Even the design system established by the United States government in 2015 at www.digital.gov

recommends using a gear icon for settings. (U.S. Web Design System n.d.). This is shown in Figure 14

below.
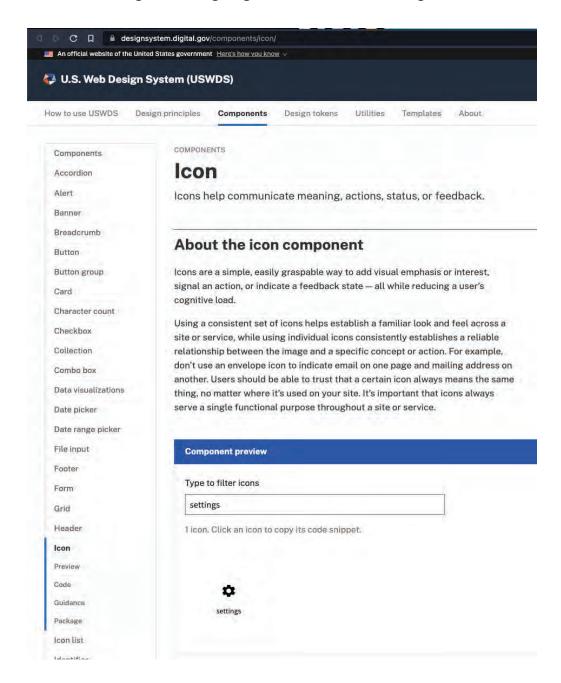
Figure 14—Digital.gov search result for settings icon

72. Once a subscriber enters the cancelation flow from the Settings (or Help) page, the navigation buttons are standard. Match.com includes "Back to home" and "Continue Cancelation" buttons placed in their standard locations at the bottom left of the content area of these functional pages. The buttons are not hidden or obfuscated. They are large, easily visible, and the text can be clearly read. Their use of taking you home, or continuing cancelation, is consistent with their labels and standard navigation conventions.

73. Finally, any paid subscription service needs to understand why a subscriber might choose to cancel. That information is particularly important for services like Match.com because cancelation does not necessarily mean that the subscriber is unhappy with the service, so the reason is important to know so that Match.com knows how to react. For example, a subscriber may choose to cancel because Match.com helped them find their new partner—in which case the Match.com service performed well— or perhaps they couldn't find anyone—in which case Match.com might want to improve the service. Both are important to know, and generally, subscribers want the service providers to know if the platform worked for them or not. (Gingiss 2019). Match.com includes a simple, optional survey to ask subscribers why they are canceling. The subscriber doesn't have to answer these simple questions, but it's not a large request to ask for clarity regarding the reasons for the cancelation or satisfaction with the service.

E.   Heuristic 5: Error prevention

"Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action."

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74. Match.com's cancelation flow is designed in a way that eliminates common errors and includes steps to help make sure a subscriber does not commit to an irreversible action by error. Of course, no system is perfect for every user, so this is not to say a system needs to have a 100% success rate at all times for every person in order to be "simple." That would constitute an unreasonable and likely impossible requirement.

75. The focused flow and clear navigation controls have only two options "Back to home" or "Continue Cancelation," which help prevent errors at every step.

76. When the subscriber is prompted for optional additional feedback regarding their experience, the options are presented in single-selection-only controls called radio buttons, meaning the subscriber need not type or engage beyond a simple click. This helps minimize errors. Even when selecting an option that prompts the subscriber with one or two follow-up questions, these are also presented with radio buttons. Still, each is optional and is not a required step to continue canceling. The subscriber can merely skip the question and click Continue Cancelation.

77. To simplify and clarify things, Match.com also breaks the cancelation process into several steps. This is a useful design pattern used to minimize errors by helping ensure only subscribers that truly want to cancel, actually do cancel. If Match.com used a "one-click" cancelation feature, that would likely be far more prone to erroneous cancelations and would be a poor design choice. Cancelation of a subscription is sometimes difficult to reverse, and it is, therefore, reasonable to break the cancelation process into a small number of simplified steps to minimize errors.

F.   Heuristic 6: Recognition rather than recall

"Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate."

78. Match.com's cancelation flow satisfies this heuristic. Each action and object are clearly visible. Match.com does not require the subscriber to remember information from one section to the other. Match.com includes clear and obvious instructions throughout.

79. As subscribers begin the cancelation flow, clarity of language and clear, obvious labels lead them down the path. And again, when subscribers are prompted for optional additional feedback regarding their experience, the options are presented in single-selection-only controls called radio buttons, meaning the subscribers need not type or engage beyond a simple click.

80. The text and headings on each screen are clear and discrete, indicating to subscribers what they are doing, and the consequences of moving forward along either path.

G.   Heuristic 7: Flexibility and efficiency of use:

"Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions."

81. This heuristic is satisfied two-fold. First, novice users like myself as well as 91.5% of our tested novice users in the study were able to cancel successfully. Having done it the first time with little to no experience with the website is a key indicator of good usability. If novice users can find and accomplish

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the task at least once, the chances of being able to replicate it again and again approaches the near

100% success range historically. In the case of Match.com, should people cancel then resubscribe, it's

clear from the usability test data they would then be much more likely able to cancel on subsequent

attempts.

H.   Heuristic 8: Aesthetic and minimalist design

"Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of

information in a dialogue competes with the relevant units of information and diminishes their relative

visibility."

82. Based on my review of the cancelation flow, I did not identify any irrelevant or unnecessary information.

Each piece of information provided to the subscriber was clear, relatively concise, and easy to

understand.

83. Once the subscriber has entered the Manage Subscription page, the options and paths become clear,

limited, and obvious. Besides standard banners, header, and footer navigation, the subscriber's focus is

entirely on the page content with its navigation options to either manage their subscription or cancel it.

84. As the subscriber proceeds to cancel, minor additional instructions and clarifying content are introduced

as gates to ensure the subscriber is aware of what they're doing and the consequences (see Heuristic 5,

Error Prevention). The subscriber is prompted with optional feedback questions in simple, plain radio

button forms, with clear calls to action to either return home or continue canceling. Heuristic 8 is

satisfied.

I.   Heuristic 9: Help users recognize, diagnose, and recover from

errors

"Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution."

85. I did not see any error messages in the cancelation flow either through my testing or through the empirical tests that I describe below. Thus, there was no opportunity for any error message to be in codes.

86. Match.com makes it easy for a consumer to recover from any error, by returning home and beginning again, or using the back button in the browser.

J.   Heuristic 10: Help and documentation

"Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large."

87. Match.com satisfies this heuristic as it provides documentation and instruction on how subscribers can cancel. As described earlier, subscribers may enter the cancelation flow by directly navigating to their Settings page, or through the Help page. Help is available from the gear menu where the user also found Settings, or from the footer on virtually every page, as shown in, for example, Figures 1-8 above.

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88. If subscribers choose Help, there are at least thirteen paths that lead directly to detailed instructions on

how to cancel. Those instructions are provided in Section V above. Images for this flow are included in

Appendix G.

K.   Conclusion: Nielsen's 10 Heuristics

89. In conclusion, for the reasons explained above, Match.com's cancelation flow satisfies all 10 heuristics.

Based upon this analysis, in my expert opinion, the flow meets best practices for web usability and

simplicity.

L.   Nielsen's Usability Components

90. I next analyzed whether Match.com's cancelation flow meets the five quality components of usability

defined by Nielsen: learnability, efficiency, memorability, errors, and satisfaction. As explained below, I

conclude that Match.com's cancelation process satisfies each of these five quality components or is

inapplicable.

M.   Learnability

91. The cancelation flow is simple and easy to use, as described above. From my experience in usability and

design, it should not require any learning to use. Even so, Match.com provides learning opportunities.

First, the format, color, and approach for the cancelation are similar to what Match.com uses for sign-up

and generally throughout the site. Thus, subscribers will learn by using the website how to approach

cancelation. Plus, the Help documentation provides additional opportunities for subscribers to learn how

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to cancel. Overall, the information architecture (how the information is combined hierarchically in relation to other information) is standard and follows common, established paradigms.

N.   Efficiency

92. The Match.com cancelation process is efficient. Because it includes a limited amount of information during each step of the process, the information is quickly scannable, not even requiring full reading or comprehension before moving to the next step. Common keywords like "subscription", "cancel", and "continue" are all present and in clear, legible text. This makes the scanning of each page quick, allowing the subscriber to efficiently move on to the next step.

93. In addition, there are not many steps to cancel and as explained below, subscribers can cancel quite quickly, typically in less than 2 minutes. That is efficient.

O.   Memorability

94. Even though memorability would not necessarily be a requirement for this process, as subscribers don't often perform cancelation tasks many times repeatedly in a short time frame, the core elements of Match.com's flow are easily retainable due to their straightforward nature, and the small number of steps. I canceled several times to test memorability. While the first time took me 3 minutes to cancel (longer than it would normally have taken me as I was also recording and carefully noting my observations, whole-screen overviews, and overall experience), my subsequent cancelation attempts only took about 30 seconds. This shows that the process is memorable.

2.   There are also memory advantages because the cancelation process is like the sign-up process. What subscribers learned from the sign-up syntax and scheme will help subscribers cancel easily.

P.   Errors

95. There are limited places for errors in the cancelation flow. The first place a subscriber might encounter an error is not being able to find the beginning of the cancelation flow. In this case, there are two major places subscribers can start, Settings or Help. Both are straightforward and clear about where to go next. The language of Settings includes an option "Manage subscription" (on the screens I tested on, it was located dead center of the screen and the first text to catch my eye due to its placement at the end.) It was the first place a subscriber is likely to look for anything regarding subscriptions, including canceling. Upon review of the other options, it is even more obvious that "Manage subscription" is the correct beginning to the flow, as the other options have nothing to do with cancelation.

96. If a subscriber chooses to search for the cancelation feature via Help, the process is also straightforward. Whether they choose to search for "cancel" and select its auto-complete prompt, or choose one of at least twelve different search terms resulting in cancelation-related content and click Search, or select the "Manage My Subscription" Help topic, the subsequent screens direct and guide them to the same "Manage subscription" feature to help them begin canceling.

97. Once a subscriber selects "Manage subscription," the flow to cancelation completion is straightforward and clear. The only place a subscriber could potentially err is in forgetting their own password (which they had used to log in initially, they might even have stored in a password manager that automatically fills in the password, or they can retrieve via the simple Forgot Password flow), or choosing the option "Subscription Status" instead of the only other option, "Cancel Subscription." The likelihood of committing errors on that screen is extremely low. After that, the flow doesn't fork. The subscriber can end the process by clicking a "Back to home" button or simply continue by clicking the large, blue "Continue Cancelation" button. The only other option the subscriber has is choosing a save offer, if

presented with one, but as described above, the options on the save offer page are clear and

straightforward, and a subscriber is unlikely to be confused.

98. On the follow-up question screens, there is no text indicating at this stage that the subscriber's

subscription has been canceled, only instructions regarding when the last day of the subscription will be

if the subscriber cancels, and a warning that the subscriber will continue to be billed according to the

subscription agreement. Both on this step and the subsequent second question, there is no indication

the cancelation is complete yet, and the large blue button reads "Continue Cancelation" indicating there

is more to follow, making errors unlikely at this stage.

99. Only when a subscriber successfully finishes the cancelation process does the large text at the top read

"Your subscription has been canceled." If a subscriber skips that header and reads the content below, it

begins with the text "Your confirmation number…" and "You do not have to do anything further…" Thus,

all three separate lines of text confirm to the subscriber that they've successfully canceled their

subscription. Additionally, the subscriber receives an email confirmation of cancelation, which is

common. The failure to see a confirmation page or receive a confirmation email should indicate to the

subscriber that the cancelation may not have been completed.

100.   In summary, even if subscribers were to experience a navigation error, they're easily recoverable,

and any errors would continue to redirect them back to the proper cancelation path.

Q.   Satisfaction

101.   Overall, the cancelation flow meets the requirements of satisfaction. The language, fonts, layout,

and overall aesthetics are clear, legible, and obvious. I found no issues with any of these characteristics.

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102.   Based on the foregoing heuristic analysis, in my expert opinion, the Match.com online

cancelation flow is simple, i.e., clear and effective.

103.   Although my above analysis focused primarily on the current version of Match.com's online

cancelation flow, I understand that there have been some changes to various Match.com pages since

September 2014. Those pages are no longer on Match.com's live website, but I reviewed videos and/or

screenshots of past versions of those pages. Reviewing those versions does not change my opinion that

all versions of Match.com's online cancelation flow since at least September 2014 have been simple.

VII. USABILITY STUDY SUMMARY

104.   To test the results of the heuristic analysis described above, I designed and conducted an

empirical study of actual consumers who are within the applicable universe of potential Match.com

subscribers. The objective of this study was to empirically test whether Match.com's cancelation process

was simple or not. The full study methodology is provided in Appendix C, and the raw data is provided in

Appendix H. I briefly describe the study methodology and then report on the results below.

Study Methodology
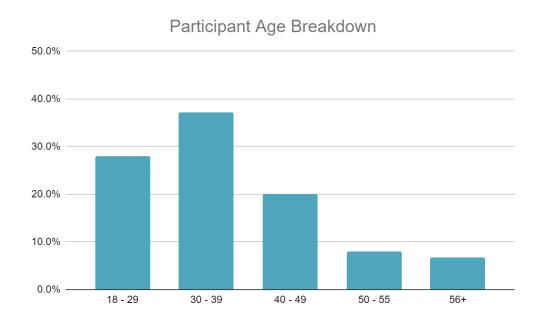
105.   I used the web platform UserTesting.com to host the study and recruit participants from its

panel. The basic design of the study was simple. UserTesting.com recruited a cohort of representative

potential users of Match.com. I asked the participants to sign up for a Match.com subscription. I then

asked the participants to cancel their Match.com subscription. For this study, I used Match.com's actual

live website, so it was a real test for what subscribers actually see and do under real-world conditions.

106.   I then analyzed several objective criteria to determine whether the cancelation process was

simple:

1.   What percent of participants who signed up were able to cancel? If the process were simple, I

     would expect that a significant percentage of subscribers (more than 80%) would be able to

     complete the task of cancelation.

2.   How long does it take for participants to cancel? If the process were simple, I would expect that

     canceling would not take more than a few minutes.

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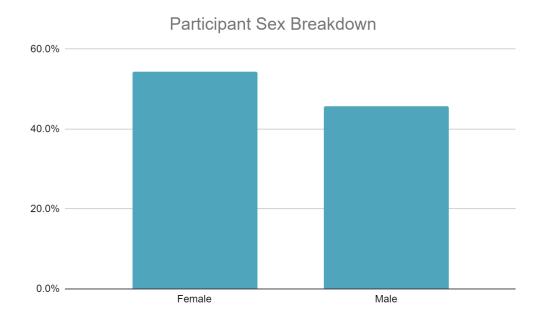
3. Does it take longer for participants to sign up for a subscription (including both registration and completing the purchase process) or to cancel their subscription? If the process were simple, I would expect that it would take more time to sign up than to cancel.

107.   I also sought to analyze whether participants subjectively perceived the cancelation process to be simple. To conduct this analysis, after the participants attempted to sign up and after they attempted to cancel, I asked them to rate the task on a standard 1-5 scale of simplicity/difficulty.

1. How do participants perceive the cancelation process? If it were simple, I would expect most respondents to rate the process as simple.

2. How does the signup process compare to the cancelation process in perceived difficulty? If the cancelation process were simpler, I would expect more participants to say so.

Study Participants
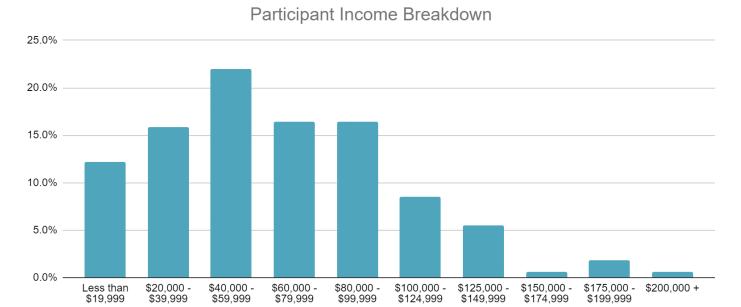
108.   UserTesting.com recruited 233 participants. 69 were screened out because they were unable to sign up for a Match.com subscription. The reason for the 69 failures was the limitations of the study parameters. To minimize potential fraudulent use of our virtual credit cards, we had to limit the credit limit on each card to $50. This meant participants were required to select a very specific subscription type and payment option (all carefully described in their task instructions). If participants failed to select the appropriate options, they were unable to subscribe, and failing to subscribe meant these participants were unable to even attempt the second task of canceling due to their accounts not having an active subscription. They were then excluded from the final study counts as anyone who failed to subscribe would not be a potential candidate for canceling a subscription. All results and charts in this report therefore are from a total participant count of 164. The charts below show the age and demographic
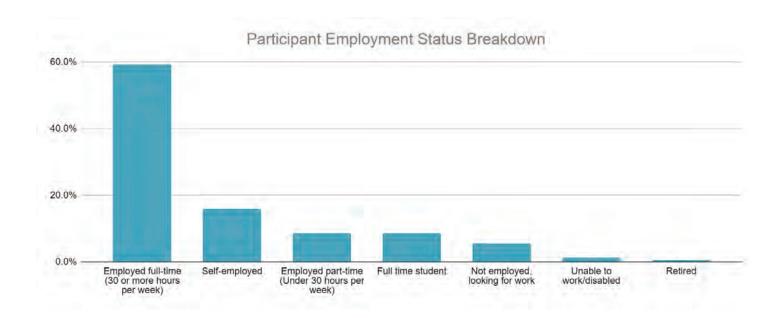
breakdown of the study participants. This was designed to closely track Match.com's actual customer

demographic distribution.

Participant Age Breakdown

Participant Sex Breakdown

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Participant Income Breakdown

Participant Employment Status Breakdown

109.   One challenge of this study was that I needed to provide a credit card so participants could sign

up on Match.com without using their own cards. To do this, I provided participants with access to a

virtual credit card set up by my firm, Precocity, that could be used to subscribe to the live Match.com

site. By using real money on the real website with first-time Match.com users, we were able to see first-hand how real users might perform in their attempts to subscribe and cancel. At the same time, because the participants did not use their own money, they arguably had less of an incentive to ensure they successfully canceled. So if anything, my usability study is conservative, as the percentage of people able to successfully cancel if their own money is at stake may be larger than that reflected in my usability study.

Confidence Interval and Statistical Analysis

110.   A confidence interval level refers to the long-term success rate of the method. It indicates how often this type of interval will capture the parameter of interest. You've probably heard surveys and polls say things like "This number is accurate plus or minus 1%". That margin of error is derived from the confidence interval. A specific confidence interval gives a range of plausible values for the parameter of interest. A 90% confidence level is the benchmark commonly used for user experience design usability tests. However, for this study, I used a higher and stricter 95% confidence level so I would have greater certainty of the results found.

A.   Summary of Results

111.   Overall, this study demonstrated the Match.com cancelation process is simple. Canceling on Match.com is as simple or simpler than comparable subscription sites and it is simpler for subscribers to cancel than it is for them to sign up. The high rates of successful cancelation, above-average SUS scores, and participant feedback all indicate that the Match.com online cancelation process is simple. The quantitative highlights are:

- **91.5%** of participants who signed up were able to cancel successfully

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- It took participants an average of **74 seconds** to cancel on Match.com

- Participants were able to cancel much faster than they were able to sign up—Average Cancelation was **16.3% of the time** it took to sign up, or **6.1 times faster**

- **84.7%** of participants thought canceling was at least as simple as signing up

- **88.3%** of participants thought canceling was simple or were at least neutral as to the simplicity/difficulty

- Match.com received an "A Grade" on a System Usability Score (**81.6**), which makes it among the top 10% of all websites in terms of usability

B.   Cancel Success Rates

112.   Overall, 91.5% of participants that subscribed were able to cancel. If the cancelation process were not simple, we would see a far lower success rate on this task. A study conducted by Dr. Sauro of 1189 tasks taken from 115 usability tests from 3472 users indicates "...the average task-completion rate is 78%". (Sauro 2011b) This means the cancelation task completion rate of 91.5% is better than 71.8% of all usability tasks on average and is only .5% shy of being in the top quartile. The figures below provide this data.

Cancelation Completion Rate

Incompletions
8.5%

Completions
91.5%
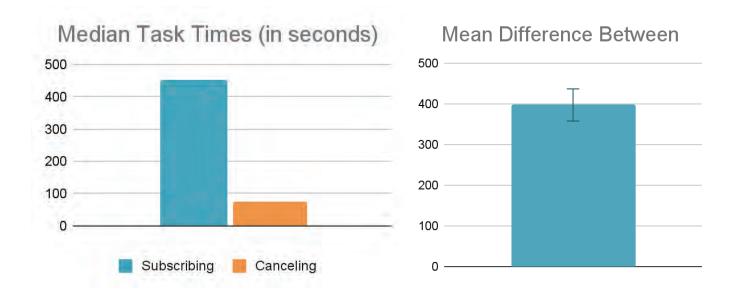
Total Completion Lower Limit	Total Completion	Total Completion Upper Limit	Incompletion
86.1%	91.5%	94.9%	8.5%

Time To Complete Each Task

113.   I next analyzed how long it took the participants to complete the subscription task and the

cancelation task. There was a notable and statistically significant difference in task time between

subscribing and canceling. It took participants on average just over one minute (median task time of 74

seconds) to cancel their subscriptions. The relatively short time it took participants to cancel suggests

they made few (if any) "errors" they had to recover from by backtracking, and instead likely were able to

proceed directly and quickly through the cancelation flow.

114.   It took participants much longer to subscribe—a median of 453 seconds. For task time, it is

common practice to use median rather than mean, the common understanding of an average, to

estimate the center of the population. Thus, participants could cancel in just 16.3% of the average task

time it took to subscribe. Participants were on average able to cancel in 83.7% less time than it took to

subscribe. The figures below summarize this data.

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Subscribing		
Task Time Lower Limit	Median Task Time	Task Time Upper Limit
400 sec	453 sec	484 sec

Canceling		
Task Time Lower Limit	Median Task Time	Task Time Upper Limit
64 sec	74 sec	81 sec

c.   System Usability Scale (SUS) Scores

115.   After each testing session, participants were asked a series of questions that are part of the System Usability Scale (SUS) survey.

116.   According to the government website usability.gov, the SUS "provides a 'quick and dirty', reliable tool for measuring the usability." The SUS "consists of a 10-item questionnaire with five response options for respondents; from Strongly agree to Strongly disagree. Originally created by John Brooke in 1986, it allows you to evaluate a wide variety of products and services, including hardware, software, mobile devices, websites and applications."

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117.   As usabilty.gov explains "SUS has become an industry standard, with references in over 1300

articles and publications."

118.   Based on research by Jeff Sauro, Ph.D., a SUS score above 68 would be considered above

average, and anything below 68 is below average. A score of 80.3 would place a product in the top 10%

and is the point at which it becomes more likely that a user will recommend the website to a friend. For

this reason, 80.3 is the goal of a strong website. (Sauro 2011a)

119.   The chart below provides the recommended way to interpret SUS scores.

MEANING OF SUS SCORES/RELATED ADJECTIVES (Lewis and Sauro 2018)

Grade	SUS Score	Percentile Range	Adjective
A+	84.1–100	96–100	Best Imaginable
A	80.8–84.0	90–95	
A-	78.9–80.7	85–89	Excellent
B+	77.2–78.8	80–84	
B	74.1–77.1	70–79	Good
B-	72.6–74.0	65–69	
C+	71.1–72.5	60–64	
C	65.0–71.0	41–59	Average

C-	62.7—64.9	35—40	
D	51.7—62.6	15—34	Poor
F	0—51.6	0—14	Worst Imaginable

120.   The results of the SUS questions for Match.com was **81.6**. This is an **A rating**, and very strong. It puts Match.com's signup and cancelation flow among the top 10% of all websites in terms of usability.

Average SUS Score Across All Participants:

Lower Limit	Average SUS Score*	Upper Limit
A- (79.0)	A (81.6)	A+ (84.2)

D.   Qualitative Questions

121.   In addition to the objective criteria, I also asked several qualitative questions so I could determine user perception of the simplicity/difficulty of cancelation. This section is split into three categories: Introductory Questions, Task Questions, and Closing Questions.
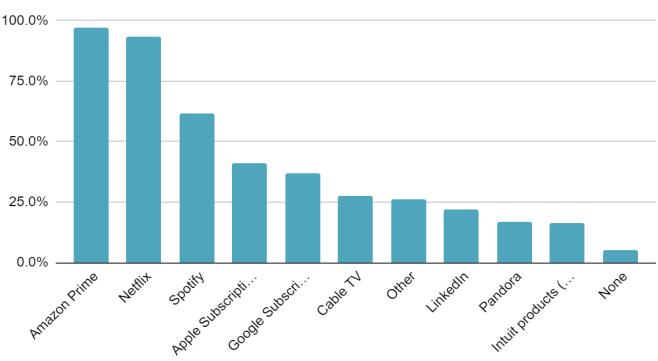
E.   Introductory Questions

122.   **Intro Question 1:** Have you previously signed up for a paid subscription online? If so, please indicate which online subscription you have signed up for below. If the service is not listed, select "Other." If you have *not* signed up for a subscription online before, select "None."

123.   The figure below shows the results of this question. Most participants had signed up for another web-based subscription service, with Amazon Prime and Netflix being the most common.

Other Subscription Site Usage by Participants

Other subscription sites or types of online subscriptions mentioned include:

- Tinder
- Food plans
- Audible
- YouTube TV/YouTube Premium
- Clothing
- Hulu

- Disney+
- HBO Max
- Costco
- Fitness
- Charities
- Crunchyroll

- Sports Channels
- Patreon
- Peacock
- Other dating sites
- Adobe

- Shudder
- SlingTV
- Paramount+
- Gaming subscriptions
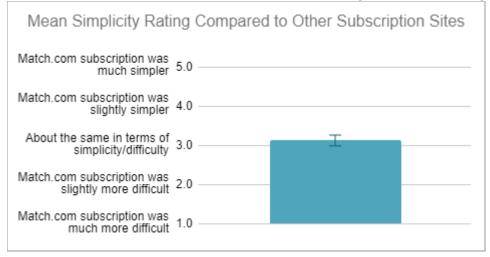
F.   Task Questions

Subscription Comparison

124.   After the participant completed signing up for Match.com, we asked them to compare the

Match.com subscription experience to their other subscription experiences. Here is the question:

125.   **Task Question 1:** How did your experience subscribing to Match.com compare to your

subscription experience for *other* online products or services you have subscribed to?

1. Match.com subscription was much more difficult

2. Match.com subscription was slightly more difficult

3. About the same in terms of simplicity/difficulty

4. Match.com subscription was slightly simpler

5. Match.com subscription was much simpler

126.   As the figure below shows, participants reported that signing up for Match.com was about the

same in terms of simplicity as signing up for other subscription services. With a margin of error of .14 at

95% confidence, we can be quite confident that users feel that the Match.com subscription process is

about as simple as any of the other subscription sites with which they are familiar.

Mean Simplicity Rating Compared to Other Subscription Sites

127.   This next section covers the **Single Ease Question** (SEQ) asked for each of the two tasks (sign up

and cancelation). This is a standard question to ask after a task during a usability study to gauge the

participant's perception of the ease/difficulty of that task. The participant provides an answer on a 5-

point scale ranging in difficulty/simplicity. These data can then be analyzed statistically for comparison

or benchmarking purposes.
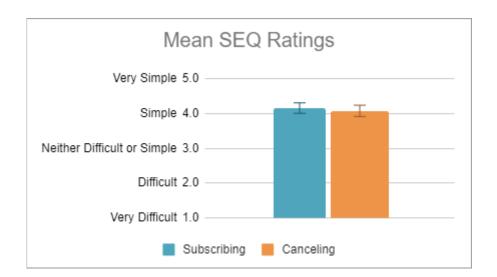
Subscription Single Ease Question   **Cancelation Single Ease Question**

1. How would you best describe the   2. How would you best describe the

   subscription process on Match.com?   **cancelation** process on Match.com?

   1. Very Difficult   1. Very Difficult

   2. Difficult   2. Difficult

   3. Neither Difficult or Simple   3. Neither Difficult or Simple

   4. Simple   4. Simple

   5. Very Simple   5. Very Simple

128.   As the results below show, both subscribing and canceling were rated to be at about a 4, which is

   "simple" in this case. The difference between the two scores was found to be from 0 to 0.26 at 95%

   confidence and, therefore, not statistically significantly different (p=.392).

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129.   In total, 88.3% of participants rated the cancelation process as very simple, simple, or neutral in terms of simplicity.

G.   Closing Questions

Subscription vs Cancelation Comparison

130.   We then asked participants to compare their experience signing up to their experience canceling.

131.   **Closing Question 1:** How did your experience **subscribing** to Match.com compare to your experience **canceling** your Match.com subscription?

1. Canceling was much more difficult than subscribing

2. Canceling was slightly more difficult than subscribing

3. Canceling and subscribing were about the same in terms of simplicity/difficulty

4. Canceling was slightly simpler than subscribing

5. Canceling was much simpler than subscribing

132.   Overall, as the results below show, participants rated the cancelation process as slightly simpler than the subscription process. Although both were rated as simple, the participants reported cancelation was slightly simpler still. Moreover, 84.7% of responses were a 3 or higher. Meaning nearly 85% of participants rated the cancelation process as simple as, or simpler than, the subscription process.

App. 806

VIII.   ANALYSIS OF MATCH.COM SUBSCRIBER DATA

133.   I also analyzed Match.com's actual subscriber data to determine whether Match.com had data to

show whether subscribers could easily cancel on its website. My analysis of this data confirms

Match.com's online cancelation flow is simple. The data is also consistent with the results from my

usability study described above.

Cancelation Success Rate

134.   I calculated the percentage of subscribers that successfully cancel through the online cancelation

flow or accept a save offer, out of the total number of subscribers that enter the flow (defined as

clicking the "Cancel Subscription" button that leads to the first survey page).[9] Using that approach, from

January 2013 through December 2022, over 95% of subscribers who entered the flow either canceled

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[9] I consider this the appropriate page at which to treat a subscriber as entering the cancelation flow because the subscriber could have visited all previous pages for non-cancelation reasons. For example, the subscriber could have visited the Account Settings page to change their account password or manage email notifications. Or the subscriber could have visited the "Manage subscription" page to view subscription status.

through the flow or accepted a save offer before their next renewal.[10] In my experience and expert opinion, that high of a "success rate" indicates a simple and easy-to-use process.

135.	My analysis is conservative because the subscribers who entered the flow but did not ultimately cancel do not necessarily represent "failed" cancelation attempts. There could be many reasons a subscriber who entered the flow did not complete the cancelation. For example, a subscriber may have entered the cancelation flow with no intent to cancel but hoping to trigger a "save offer" to obtain a discounted renewal. If the subscriber was never presented with and therefore never accepted a save offer, that subscriber would be counted as a "failed" cancelation in the analysis above, even though the subscriber never intended to cancel. Alternatively, a subscriber may have entered the flow with the intent to cancel but changed their mind for a variety of reasons. Perhaps the subscriber reviewed the list of benefits he or she would lose by canceling (presented on the second survey page) and decided not to cancel. Or the subscriber was merely browsing the site to see what the cancelation process entails if and when the subscriber might want to cancel at some point in the future, with no present intent to cancel. Or a subscriber intended to cancel but was interrupted by some other event entirely unrelated to the cancelation flow (someone at the door, a telephone call, etc.). But because those subscribers did not cancel, they would all be treated as "failed" cancelations in the analysis above, thereby artificially decreasing the "success rate." Thus, it is likely that the number of subscribers (if any) that were truly "unable" to cancel is far less than the 5% suggested by the analysis above, further bolstering my opinion that the high success rate suggests a simple and easy-to-use process.

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[10] MATCHFTC846468. This number is calculated by dividing the sum of Columns E (reflecting the number of subscribers who canceled through the flow before their next renewal) and G (reflecting the number of subscribers who accepted a save offer), by the sum of Column C (reflecting the number of subscribers entering the flow). The result is .9546, or 95.46%, meaning over 95% of subscribers that enter the flow successfully cancel through the flow or accept a save offer prior to their next renewal.

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Average Time to Cancel

136.　　　In addition to the above, I also analyzed the median time it takes actual subscribers to complete the online cancelation flow. From January 2013 through October 2022, the median time from clicking "Cancel Subscription" to completing the cancelation was approximately 44 seconds, with a range of 36 seconds to 76 seconds.[11] In my experience and expert opinion, a cancelation process that has an average median time to complete of only 44 seconds is simple and easy to use. That number indicates subscribers can quickly and efficiently move through the pages.[12]

137.　　　As in the usability study, I also compared the median time to cancel to the median time to successfully complete the subscription purchase process (excluding the time it takes to register for an account, which is a necessary step before purchasing a subscription). Although it would be reasonable to include both registration and subscription in the comparison to the cancelation flow—which is what I did in my usability study described above—because both are necessary steps before a consumer can actually purchase a subscription, I understand that Match.com does not track the amount of time that it takes a user to complete the registration process, so that data is unavailable. As a result, I took a conservative approach here and compared only the payment process completion time to the cancelation flow completion time. As indicated by the length of time it took participants in the usability study to sign up for a Match.com subscription (including both registration and subscription), the registration process is relatively lengthy as compared to the subscription payment process. A video of the entire registration and subscription process is available at Appendix K.

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[11] MATCHFTC777081. This number is the average of the monthly median time to cancel values in Column C.
[12] The average median time from the password entry page to cancelation confirmation (represented in Column D of the same spreadsheet) is approximately 94 seconds, which is understandable given the time it takes to enter a password and potentially complete a reCAPTCHA, if presented with one. Inclusion of those pages in the median time to cancel does not change my opinion.

138.   From January 2013 through August 2022, the average median time from the first payment page click in a session to a successful subscription purchase was approximately 175 seconds—over four times longer than the average median time to cancel.[13] This indicates to me the cancelation process is at least as simple as—and likely simpler than—the purchase process.

DATED: January 13, 2023

Brandon E.B. Ward

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[13] MATCHFTC774721. This number is the average of the monthly median time to successful purchase in Column C.

APPENDICES

A Curriculum Vitae

BRANDON E.B. WARD — CXO, EXPERIENCE DESIGN LEADER/SPEAKER/EDUCATOR

brandonebward.com • brandonward@precocityllc.com

I seek executive design leadership opportunities where the people using the product are at the heart of the business.

My career has included designing experiences, leading, speaking, teaching, writing, and directing; creating and developing unique, award-winning, and usable software, mobile apps, websites, and AR/VR experiences.

I hold a master's degree in Interactive Media Design and 3 Bachelor's degrees in Music and Theatre.

SKILLS

LEADERSHIP	Team building, Mentoring, Management, Product, Scrum, Speaking, Teaching
DESIGN	UX/UI/Service, Web, Sound, Instructional, Graphic, Product
PRODUCTION	Software, Web, Mobile, Graphic, Audio, Video
LANGUAGES	English, Cebuano, Hiligaynon, Tagalog

EXPERIENCE

PRECOCITY – Chief Experience Officer (CXO), Senior Director of User Experience   2016 - Present

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I lead the UX efforts both internally and as a consultant. I work closely with the executive team to define Precocity's UX practice, methods, tools, ethos, and culture. As a consultant, I execute these philosophies and practices for a variety of clients, from research and testing to UX/UI design, to audio and video production. I was in charge of sourcing, interviewing, and hiring consultants and executives, as well as mentoring the UX/UI teams. I coordinate with the heads of the Data Science and Engineering departments to align our visions to ensure a cohesive, comprehensive, data-driven design offering.

- Designed, led, and executed Toyota's first usability research initiatives across their in-car and mobile software experiences, helping change how Toyota approaches software projects globally
- Worked closely with the executive team to attract, pitch, and land new business, write proposals, and statements of work
- Authored and designed Precocity's branded design process IDEA
- Authored, designed, and built Precocity's branded redesign process and tool EVO
- Represented Precocity at various conferences, networking, building new client relationships
- Consulted with small, medium, and Fortune 10 clients – Research, Information Architecture, UX/UI/Graphic Design, Rapid Prototyping, Usability Testing, Design Studio, Planning, Brainstorming, and Workshops

SERVICE DESIGN NETWORK - DALLAS – Founder & Host   2018 - Present

Co-founded this meetup, in-person and virtual. Grew to 1785 members in 2 years.

IMPACT UTAH – Chief Experience Officer (CXO)   2015 - Present

I help drive the service, experience, and brand design of iMpact Utah, and its holding companies. We offer best-in-class management consulting across a variety of industries.

SOUTHERN METHODIST UNIVERSITY – Instructor   2015 - Present

I teach User Experience Design, and Service Design as part of CAPE's design/development certificate programs.

IMPROVING ENTERPRISES – Senior Experience Designer   2013 - 2015

As a senior consultant for Improving Enterprises, I represented Improving's UX and Design interests for select clients. I worked both on-site and remotely with them, investigating their current and future products and services. I conducted user research and usability tests and designed wireframes, prototypes, and mockups based on that research. I worked closely with leadership across all teams, including the C-suite, both client-side and within Improving.

- Worked closely with executives, product ownership, and development to ensure quality and correct results
- Major point of contact between client executives and Improving Enterprises
- Conducted user research and usability tests for both new and redesigned projects
- Lead tool and process training
- Spoke at industry conferences
- Hosted user groups and meetings on behalf of Improving Enterprises

STUDIOGOOD – Director of UX/UI   2013

Lead the company in a shift from social to digital agency and establish user experience as a core practice. Along with the leads from development and account management, I lead the development and implementation of a new responsive workflow process to build efficiencies while producing responsive

websites, microsites, and Facebook tabs. Some projects required concept-to-execution turnaround in as little as 5 days.

- Helped establish a new responsive, agile design/development process for producing responsive websites.

- Lead brainstorming sessions for idea generation for client pitches, and social and marketing strategies

- Interviewed and counseled every person in the company as to what was wrong and how we could fix it - instituted changes to help with major issues, and morale.

- Coordinator for design and development teams, ensuring team parity during the lifetime of the project.

- Designed social graphics, posts, and media for major brands.

- Designed responsive websites, Facebook Tabs, and microsites (wireframe, UI, layout, graphics, icons)

- Established regular brown-bag meetings where members of the team could share new ideas and skills with the rest of the company

- Built and established usage of a central company Wiki, taught teams how to use it

TRIGEO/SOLARWINDS – Director of UX/UI, Lead/Senior Developer 2009 - 2013

I lead the front-end team in the design and implementation of all features and fixes, including front-end development. At TriGeo, I helped completely redesign and launch our most successful product release ever (from UX to icons, to GUI, to packaging) leading to a record year for the company and a key factor in the company's acquisition in 2011 by SolarWinds for $35 Million.

- Hired, built, and lead a new UX/UI Team of 6 developers and designers

- Designed and developed interaction flow, icons, color schemes, and palettes, dynamic dashboards, custom search, and query interfaces, reporting tools, labels, packaging, marketing materials, and more.

- Oversaw rebranded and updated product for release just 1 month after acquisition

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- Wrote many custom components, and established coding best practices and standards.

BRAINBOX ENTERTAINMENT – Senior Designer & Flex Developer   2008 - 2009

Contracted to bridge the gap between design and development for a new online customer-facing sporting platform (kronum.com). Helped lead the project in terms of development, scope, communication, art preparation, skinning, themes, and more.

DELVE NETWORKS – Senior UX & UI Designer 2008

UX/UI Designer for the front and back-end applications of this startup focused on video search. Quickly learned new skills to take on additional design implementation development roles to augment the team.

MEDIAPRO – Development Coordinator, UI Designer/Developer   2005 – 2007

Contracted as Flash developer quickly brought on full-time to multiple projects for graphic design, video and audio consultation, and voice-over talent. Soon advanced to full-time development coordinator. Trained 2 new developers and oversaw their progress. Highly sought-after designer/developer for internal projects for clients like American Express and Microsoft.

STAFFING TOOLS – Director of Production   2000 – 2004

UI design, MM Director, and Flash development of training and testing for digital design tools

TALKS

- UX Without the U is Your X
- Ethics Ex Machina: Designing the Future with a Conscience
- In Case of Emergency, Break Taboo

- The Triforce of UX: How to Hire a Great UX Designer

- Service Design: Your Next Career Move

- Designing a Great Experience: The ROI of UX

- Project Operation: Improving complex systems w/out killing the patient

- UX As a Service: 5 Strategies to Elevate Design Thinking in Your Organization

EDUCATION

Master of Science in Interactive Media

Indiana University, Bloomington // 2004

Taught Video Production and Non-linear Video Editing 101

B.A., multiple degrees in Vocal Performance, Music Theory and Composition and Theatre

Dean's List, Cum Laude

College of Idaho, Caldwell // 2000

B Select Representative Client List

- American Heart Association
- American Express
- Axway
- Be The Match Foundation
- Boeing
- CDC Small Business Finance
- Deloitte
- DFW International Airport
- Equinox Gyms
- HKS
- Johns Hopkins Medicine
- Love's
- Mars Chocolate

- Microsoft
- Milestone Home Service Company
- Nasdaq
- Neiman Marcus
- Nokia
- PartyCity
- Populous Financial Group
- RoboKind
- ServiceKing/Crash Champions
- Toyota
- United States Air Force
- Verizon
- YPO

C Match.com Subscription Cancelation Usability Study Test Plan

Study Objective

The objective of this study is to assess whether the web cancelation flow on Match.com is simple.

Research Design

To assess whether Match.com's cancelation flow is simple, I have designed a study that will primarily do two things. First, it will collect primary data on whether Match.com's web cancelation flow is simple. Second, it will collect consumer impression data showing whether consumers believe Match.com's cancelation flow is simple or not.

The study will have the following research design:

- A random sample of 150-200 participants.

- Each respondent will be asked to go to Match.com and become a subscriber. They will then be asked to cancel that subscription.

- Technology platform UserTesting.com will be used to record and monitor each participant's process of subscribing to Match.com and canceling their subscription. More details on the qualifications and experience of UserTesting.com are included in Exhibit 5.

- Participants will be provided with a virtual credit card to pay for their subscriptions.

- Participants will complete the tasks remotely via the UserTesting.com platform and they will not be moderated live.

- Each participant will be asked to complete a short survey questionnaire that will seek data on whether participants felt like the cancelation flow was simple or not.

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- I have designed the study to collect data on both the subscription and cancelation process so I can analyze whether the cancelation process is at least as simple as the subscription process. In this way, the subscription process is acting as a control for the study.

- Each participant will be blinded to the purpose and sponsor of the study.

- I will use best practices in usability testing and study design throughout the study.

Universe & Sample

The universe for this study includes all potential Match.com users in the U.S. between 2014-present.

 UserTesting.com will recruit a random sample of single male and female participants between the ages of 18 and 70 with internet connections who have never been Match.com subscribers and are currently single.

The participants will be recruited to match the gender and age characteristics of Match.com's customer base to the greatest extent possible. The ex ante recruitment goals are the following:

	18-29	30-39	40-49	50-59	60-70	Total
Female Recruits	24	28	25	16	7	100
Male Recruits	26	28	25	15	6	100

Before being instructed to complete any task or enter the main survey questionnaire, we will use a short screening questionnaire to collect demographic data and confirm eligibility for the study. The screener questionnaire is included in Exhibit 1.

Each participant will be blinded to the purpose and sponsor of the study.

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Training

The participants, already trained in testing via the UserTesting.com platform, will receive an overview of the usability test details via written instructions at the beginning of their study experience. That training material is attached as Exhibit 2.

Procedure

Each participant will be seated at their computer (desktop or laptop) in their environment.

Participants will first complete a screener questionnaire to confirm their eligibility for the study.

Participants will then be provided with instructions on what the first task is.

> Task 1—As efficiently as you can, subscribe for a paid Premium Three-Month subscription to Match.com.

> Task 2—Cancel your subscription.

The instructions will encourage the participants to complete each task in one sitting and to do so in the most timely and efficient manner. The platform will record the screen so we will have a record of each step a participant takes for each task. The platform will also time how long it takes the participant to complete each task.

The participants will then be asked to answer a short questionnaire after they complete (or fail to complete) Task 1 or Task 2. If a respondent fails to complete Task 1, they will not be eligible to complete Task 2. The participants will be asked to provide honest opinions regarding their experiences with tasks 1 and 2.

Standard and Objective Measures to Assess Simplicity

We will use the following objective usability measures to assess the simplicity of the Match.com cancelation flow.

Task Completion

We will assess whether participants successfully completed each task by viewing their video to see if they've landed on the correct screen. We can compare the successful completion rates between Tasks 1 (subscription) and Task 2 (cancelation). If the cancelation process is simple, we'd expect a high task completion rate for Task 2. If the cancelation process is not simple, we'd expect a low task completion rate for Task 2. To see how success/failure will be calculated see the coding rubric in Exhibit 3.

Time To Complete Task

The time to complete each scenario will be recorded and analyzed. We will compare the time to complete Task 1 (subscription) vs. Task 2 (cancelation).

Subjective Evaluations

We will use a standard questionnaire to assess how participants perceived the subscription and cancelation process. After each participant completes a task, they will be asked to answer the following questions.

The tasks and questions are identical for all participants in the study. See Exhibit 4.

SUS Survey (System Usability Scale)

The following rating scale will be used to categorize the results from the SUS surveys.

Though participant scores are 0-100, these are not percentages and should be considered only in terms of their percentile ranking. Based on research by Jeff Sauro, Ph.D., a SUS score above 68 would be considered above average, and anything below 68 is below average. A score of 80.3 would place a product in the top 10% and is the point at which it becomes more likely that a user will recommend it to a friend. For this reason, it is set as the base goal. (Sauro 2011a)

MEANING OF SUS SCORES/RELATED ADJECTIVES (Lewis and Sauro 2018)

Grade	SUS Score	Percentile Range	Adjective
A+	84.1—100	96—100	Best Imaginable
A	80.8—84.0	90—95	
A-	78.9—80.7	85—89	Excellent
B+	77.2—78.8	80—84	
B	74.1—77.1	70—79	Good
B-	72.6—74.0	65—69	
C+	71.1—72.5	60—64	
C	65.0—71.0	41—59	Average
C-	62.7—64.9	35—40	
D	51.7—62.6	15—34	Poor
F	0—51.6	0—14	Worst Imaginable

Reporting Results

An integrated report will be provided with the results of this study.

Ethics

All persons involved with the usability test are required to adhere to the following ethical guidelines:

- Minimal risk to participants and staff
- Participant's data is kept confidential
- Participants may withdraw at any time

Test Plan Appendix

Exhibit 1—Screener

1. Are you single?

    a. Yes. [Accept]

    b. No. [Reject]

    c. It's complicated. [Reject]

2. Have you ever used the Match.com service before?

    a. Yes. [Reject]

    b. No. [Accept]

3. Are you comfortable using a real email address for this study? It will not be used for marketing or sales purposes.

    a. Yes. [Accept]

    b. No. [Reject]

4. Are you comfortable using your real cell phone number for this study? It will not be used for marketing or sales purposes.

    a. Yes. [Accept]

    b. No. [Reject]

Exhibit 2—Introduction

You have decided to sign up for an online dating subscription on Match.com.

- Please proceed as if you were completing each of these tasks in real life.

- Please complete each task as efficiently and effectively as you can.

- Please mute your microphone. There is no need to talk or think aloud as you go.

- Please complete this study in one sitting.

- If you wear glasses or contacts please wear them during this study.

Exhibit 3—Coding Rubric
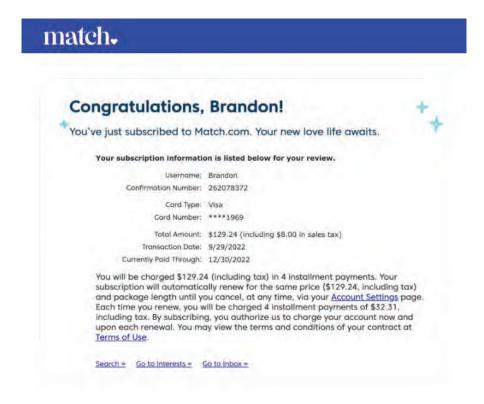
We will use the following objective usability measures to assess the results of the Match.com study.

Task Completion

At the time of reported completion, we will assess whether participants successfully completed each task.

Task 1: Subscribe

If a participant completes this task they will see this summary screen upon submission of their payment information:
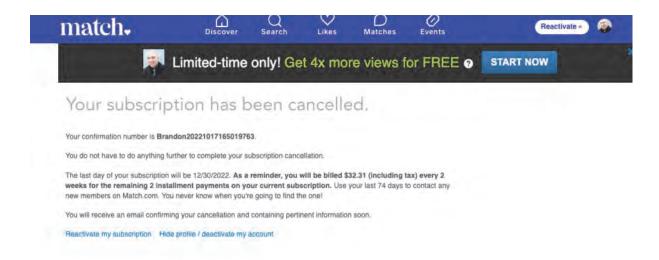
This should be tagged as #Completed_Subscription

If they didn't get to this screen during subscription, it is #paymentfailed.

Task 2: Cancel

If a participant completes this task, they will see this summary screen upon canceling their subscription:

This should be tagged as #unsubscribesuccess

If they didn't get to this screen during subscription no tagging for this task is necessary. Tag as #nounsubscribe if the screen was not reached.

Time To Complete Task

The time to complete each task is tracked by the UserTesting.com platform. We'll look at each of the two tasks we're measuring, Subscription and Cancelation, and record the time it took participants to complete them.

Exhibit 4—Tasks & Questions

Question 1

Please enter the email address you'll be using to perform your tasks today.

Note: You must use the same email address for all tasks involved in this study, and it must be a real email address. We will not use this email for marketing or sales purposes, only to validate the tasks in this study. [Written response]

Question 2

Have you previously signed up for a paid subscription online? If so, please indicate which online subscription you have signed up for below. If the service is not listed, select "Other."

Question 3

If you have *not* signed up for a subscription online before, select "None."

[Multiple choice: Netflix, LinkedIn, Cable TV, Amazon Prime, Spotify, Pandora, Apple Subscriptions, Google Subscriptions, Intuit products (e.g. Quicken, QuickBooks etc.), Other, None]

Question 4

If you marked **Other** on the previous question, please write which other paid subscriptions you've signed up for in the past. Otherwise, please type NA. [Written response]

Setup 1

The next step is to obtain test credit card information that you'll use later in the study. To access this information, in the next step when the page opens, use the username **precocity** and the password [**redacted**]. Both username and password are case-sensitive.

Note: This task is only for obtaining your test credit card information. Later, when you are asked questions about your experience with the Match.com website, do **not** include this task in your responses.

Once the test page fully loads move on to the next step.

Setup 2

Please read carefully:

This page allows you to retrieve the test credit card information you will need later in the study. You will need to enter your email address, then copy all the credit card information you see and store it somewhere you can retrieve it when prompted later.

Once you have copied and stored the credit card information somewhere safe, move on to the next step.

To access the credit card information page, use the username **precocity** and the password [**redacted**]. Both username and password are case-sensitive.

Note: This task is only for obtaining your test credit card information. Later, when you are asked questions about your experience with the Match.com website, do **not** include this task in your responses.

   <User clicks a button that launches Match.com>

Once the test page fully loads move on to the next step.

   Task 1

As efficiently as you can, subscribe for a paid **Premium Three-Month** subscription to Match.com.

- Use your **actual** zip code during sign-up (to prevent getting flagged as fraud)
- Use a real-sounding name (*not* John/Jane Doe etc., to prevent getting flagged as fraud)
- Use the test credit card info you stored at the beginning of the study. When you enter the CC information, use the zip code associated with the credit card
- If prompted for any add-ons **skip them**
- Choose to pay in **4 payments** (NOT in full today)
- Choose the Premium Three-Month option

   Post Task 1 Question 1

How would you best describe the **subscription** process on Match.com?

[Multiple choice: Very Difficult, Difficult, Neither Difficult or Simple, Simple, Very Simple]

Post Task 1 Question 2

How did your experience subscribing to Match.com compare to your subscription experience for *other* online products or services you have subscribed to?

 [Multiple choice: Match.com subscription was much simpler, Match.com subscription was slightly simpler, About the same in terms of simplicity/difficulty, Match.com subscription was slightly more difficult, Match.com subscription was much more difficult, Not Applicable]

Task 2 Setup

If prompted to verify your account with a text message please do so. We will not use your phone number outside of this study.

<User clicks a button that reloads Match.com>

Once the page fully loads, move on to the next step.

Task 2

Cancel your subscription.

Post Task 2 Question 1

How would you best describe the **cancelation** process on Match.com?

[Multiple choice: Very Difficult, Difficult, Neither Difficult or Simple, Simple, Very Simple]

Post Task 2 Question 2

How did your experience *subscribing* to Match.com compare to your experience *canceling* your Match.com subscription?

[Multiple choice: Canceling was much simpler than subscribing, Canceling was slightly simpler than subscribing, Canceling and subscribing were about the same in terms of simplicity/difficulty, Canceling was slightly more difficult than subscribing, Canceling was much more difficult than subscribing]

Post Study SUS Survey

For each of the following questions, please rate your experience **subscribing and canceling** on Match.com on a scale from 1 to 5, where 1 means you **Strongly Disagree**, and 5 means you **Strongly Agree** with the statement.

1. I think I would like to use the Match.com website frequently. [5-point Rating scale: Strongly disagree to Strongly agree]

2. I found the Match.com website unnecessarily complex. [5-point Rating scale: Strongly disagree to Strongly agree]

3. I thought the Match.com website was easy to use. [5-point Rating scale: Strongly disagree to Strongly agree]

4. I think that I would need the support of a technical person to be able to use the Match.com website. [5-point Rating scale: Strongly disagree to Strongly agree]

5. I found the various functions on the Match.com website were well integrated. [5-point Rating scale: Strongly disagree to Strongly agree]

6. I thought there was too much inconsistency on the Match.com website. [5-point Rating scale: Strongly disagree to Strongly agree]

---

7. I would imagine that most people would learn to use the Match.com website very quickly. [5-point Rating scale: Strongly disagree to Strongly agree]

8. I found the Match.com website very cumbersome to use. [5-point Rating scale: Strongly disagree to Strongly agree]

9. I felt very confident using the Match.com website. [5-point Rating scale: Strongly disagree to Strongly agree]

10. I needed to learn a lot of things before I could get going with the Match.com website. [5-point Rating scale: Strongly disagree to Strongly agree]

Pre-Tests

Before running the study against the full battery of participants we ran two pre-tests. This helped us identify any problems with the way the study was configured and any errors in the tasks or questions. The issues identified which were subsequently changed for the main ones described above are described below.

Pre-Test One

The first pre-test did not limit the recruitment to the United States.

During this pre-test, made changes to the way the instructions worked in User Testing to make it more clear for participants. Task 4 was originally as follows:

> This new test page will allow you to retrieve the test credit card information you will need to complete the following task. Once you can access the credit card information, move on to the next step. To access the test page, use the username **precocity** and the password **[redacted]**. Both username and password are case-sensitive.
>
> **Note**: This task is not a part of the study. It gives you the tools necessary to complete the tasks in this study.

Because of how tabs are launched and the instructions presented, in the original format participants weren't able to understand the tasks because the instructions disappeared. They also seemed confused about whether to report on the retrieval of the credit card information as part of their overall responses regarding the Match.com website. Task 4 was changed to:

> The next step is to obtain test credit card information that you'll use later in the study. To access this information, in the next step when the page opens, use the username **precocity** and the password [redacted]. Both username and password are case-sensitive.
>
> **Note:** This task is only for obtaining your test credit card information. Later, when you are asked questions about your experience with the Match.com website, do **not** include this task in your responses.

I then made the credit card website launch after they'd read the instructions instead of before. This necessitated an additional task following the original Task 4:

> Once the test page fully loads move on to the next step.

Now that the credit card page was loaded, I then reiterated the instructions on how to retrieve the CC information necessary for the subsequent task.

> **Please read carefully:**
>
> This page allows you to retrieve the test credit card information you will need later in the study. You will need to enter your email address, then copy all the credit card information you see and store it somewhere you can retrieve it when prompted later.
>
> Once you have copied and stored the credit card information somewhere safe, move on to the next step.

To access the credit card information page, use the username **precocity** and the password **[redacted]**. Both username and password are case-sensitive.

Note: This task is only for obtaining your test credit card information. Later, when you are asked questions about your experience with the Match.com website, do **not** include this task in your responses.

Next, I observed participants not following instructions correctly preventing them from being able to complete the task of subscribing (for example selecting a plan or payment option that cost more than the virtual credit card would allow). Original Task 6 was changed from:

As efficiently as you can, subscribe for a **Premium Three-Month** subscription to Match.com.

- If prompted for any add-ons **skip them**

- Choose to pay in **4 payments** (NOT in full today)

- Use the credit card info you were given in the other tab at the beginning of the study

To:

As efficiently as you can, subscribe for a paid **Premium Three-Month** subscription to Match.com.

- Use the test credit card info you stored at the beginning of the study

- If prompted for any add-ons **skip them**

- Choose to pay in **4 payments** (NOT in full today)

- Choose the Premium Three-Month option

Next, I italicized the word "other" in the subscription follow-up question two and added the option "Not Applicable" (in case they'd previously answered they didn't subscribe to other services). It was:

How did your experience subscribing to Match.com compare to your subscription experience for other online products or services you have subscribed to?

[Multiple choice: Match.com subscription was much simpler, Match.com subscription was slightly simpler, About the same in terms of simplicity/difficulty, Match.com subscription was slightly more difficult, Match.com subscription was much more difficult]

And Became:

How did your experience subscribing to Match.com compare to your subscription experience for *other* online products or services you have subscribed to?

[Multiple choice: Match.com subscription was much simpler, Match.com subscription was slightly simpler, About the same in terms of simplicity/difficulty, Match.com subscription was slightly more difficult, Match.com subscription was much more difficult, Not Applicable]

I also added the "Not Applicable" response option to the final post-cancel task follow-up question.

Pre-Test 2

The second pre-test showed people still struggling with the specifics of getting subscribed under the test conditions. I also observed some people getting flagged as fraudulent by Match.com due to a mismatch in their Zip codes vs their IP addresses as well as fake names. I added additional instructions to the subscription task, Task 6 in Pre-Test 1, which was now Task 8. It was:

As efficiently as you can, subscribe for a paid **Premium Three-Month** subscription to Match.com.

- Use the test credit card info you stored at the beginning of the study

- If prompted for any add-ons **skip them**

- Choose to pay in **4 payments** (NOT in full today)

- Choose the Premium Three-Month option

And became:

As efficiently as you can, subscribe for a paid **Premium Three-Month** subscription to Match.com.

- Use your **actual** zip code during sign-up (to prevent getting flagged as fraud)

- Use a real-sounding name (*not* John/Jane Doe etc., to prevent getting flagged as fraud)

- Use the test credit card info you stored at the beginning of the study. When you enter the CC information, use the zip code associated with the credit card

- If prompted for any add-ons **skip them**

- Choose to pay in **4 payments** (NOT in full today)

- Choose the Premium Three-Month option

I next observed some unnecessary and potentially confusing instructions surrounding the cancelation task. It originally read (Pre-test 2, Task 11)

Complete the steps necessary to preview your dashboard, then log out of your Match.com account. If prompted to verify your account with a text message please do so. We will not use your phone number outside of this study.

I didn't think the log-out/login steps were helping or necessary, so Task 11 became:

If prompted to verify your account with a text message please do so. We will not use your phone number outside of this study.

I then added another task in the platform to relaunch/reload the Match.com website (Task 12)

Once the page fully loads, move on to the next step.

What was the original Task 12

Log back into your Match.com account and cancel your subscription.

Was simplified to (now Task 13)

Cancel your subscription.

I finally discovered that SUS survey question 9 had been missing from pre-tests 1 and 2, and added it in for the real studies:

I felt very confident using the Match.com website.

[5-point Rating scale: Strongly disagree to Strongly agree]

Exhibit 5— UserTesting.com Bonafides
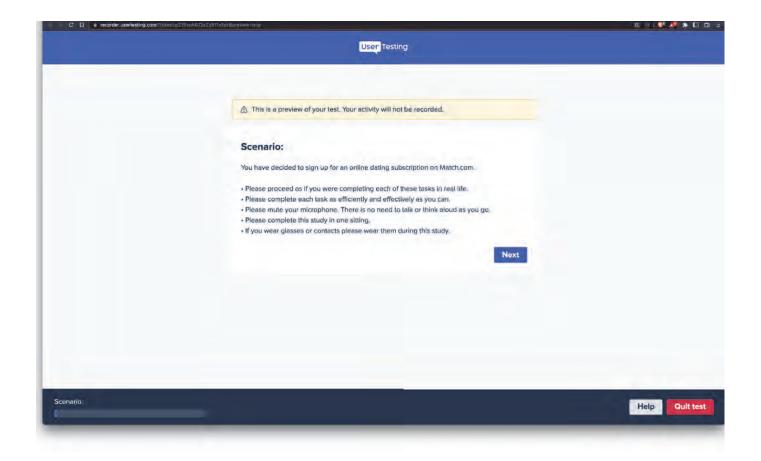
We chose to use UserTesting.com for our platform as it is one of the most popular and recommended platforms for user and usability testing in the world. ("UserTesting Pricing, Alternatives & More 2022 - Capterra" n.d.)
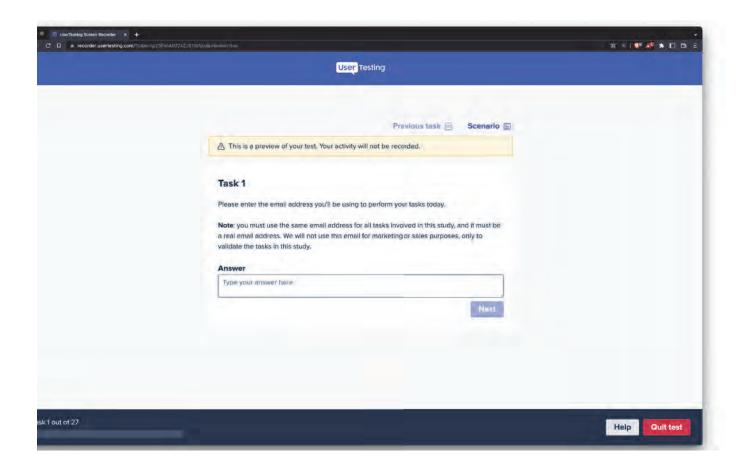
When it comes to recruiting and testing websites and applications, UserTesting.com powers half of the top brands in the world and is considered to be the world's leading human insight platform. ("About UserTesting" n.d.)
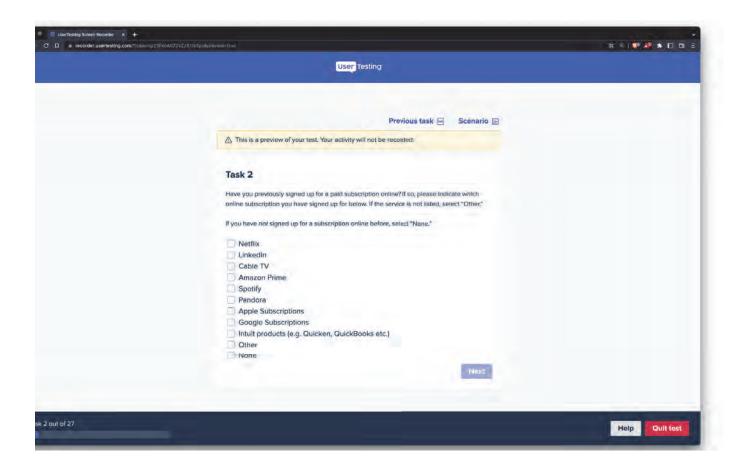
"The UserTesting Human Insight Platform taps into our global network of real people and generates video-based recorded experiences, so anyone in an organization can directly ask questions, hear what users say, see what they mean, and understand what it's actually like to be a customer." ("UserTesting Rethinks the One-Way Mirror Concept for a Remote, Virtual Usability Lab" n.d.)
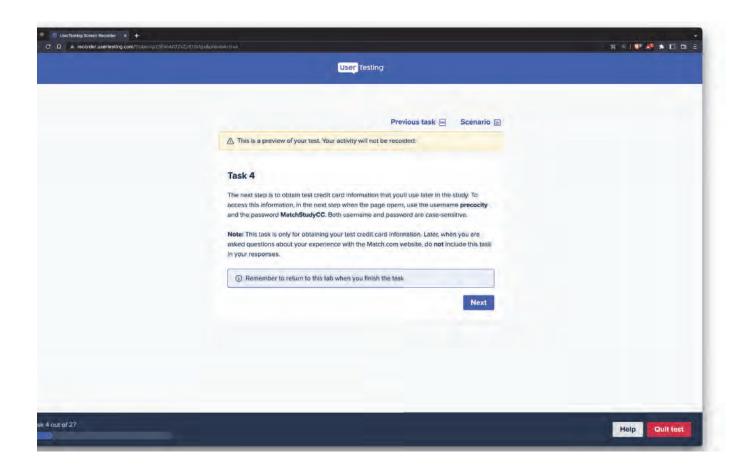
D Usability Study Screenshots
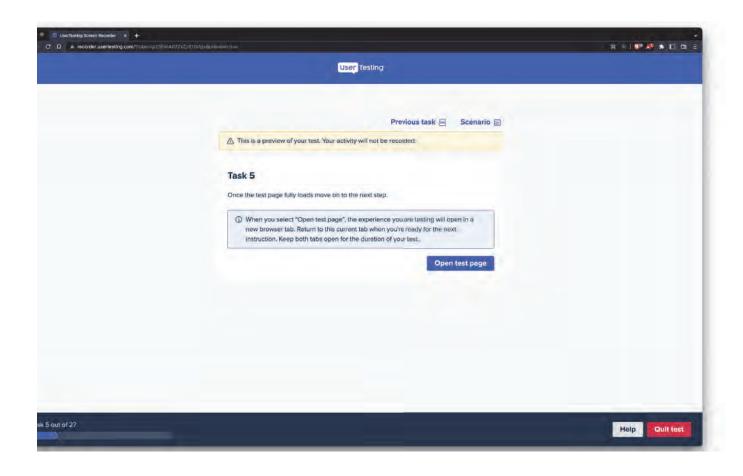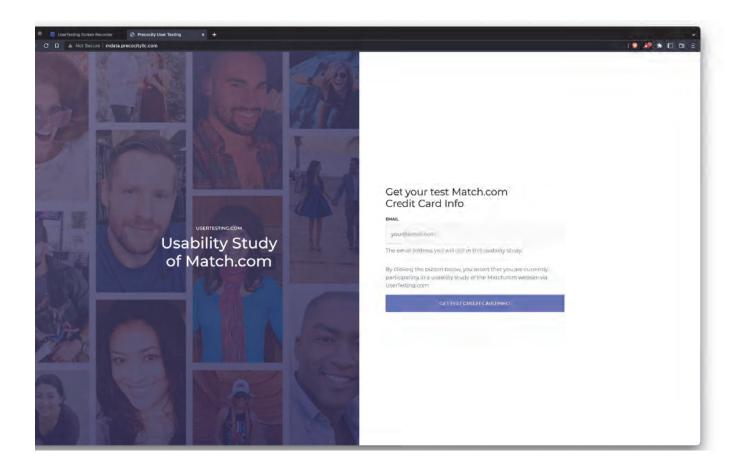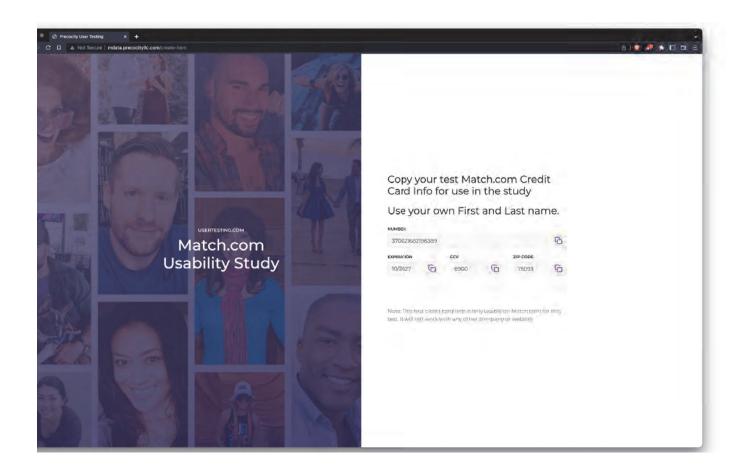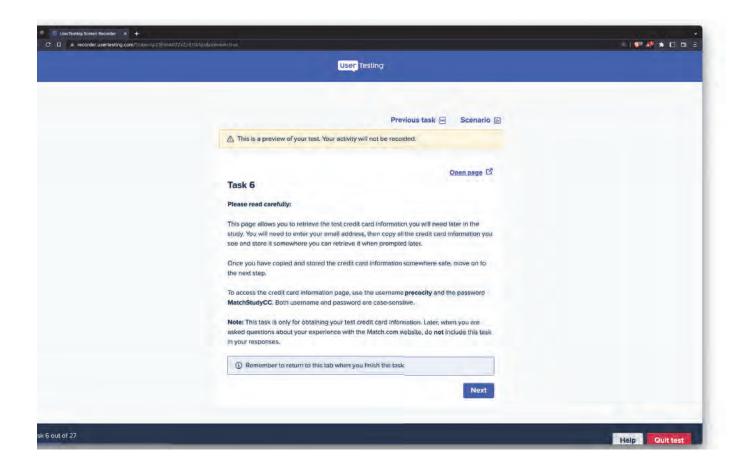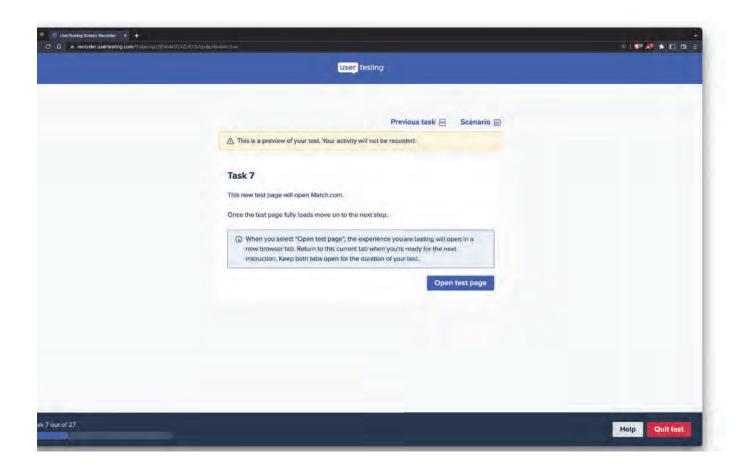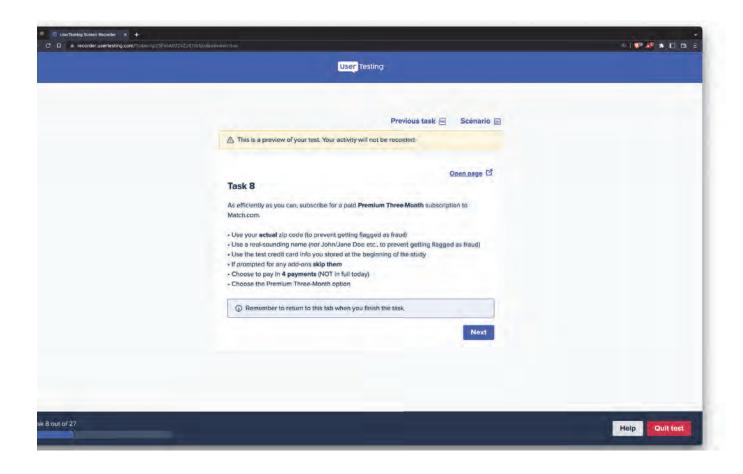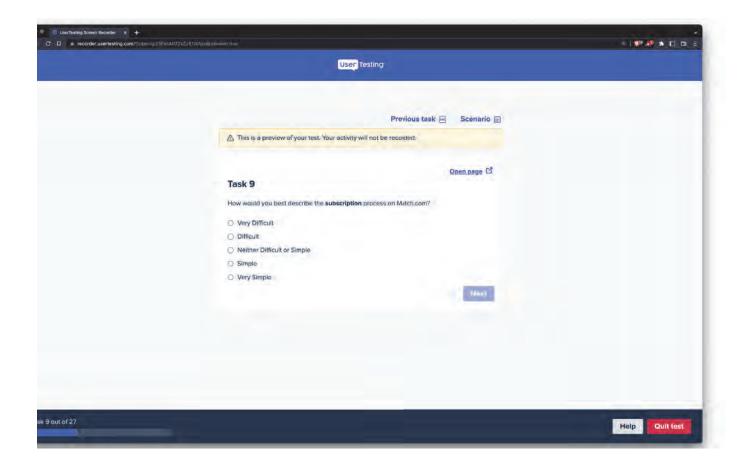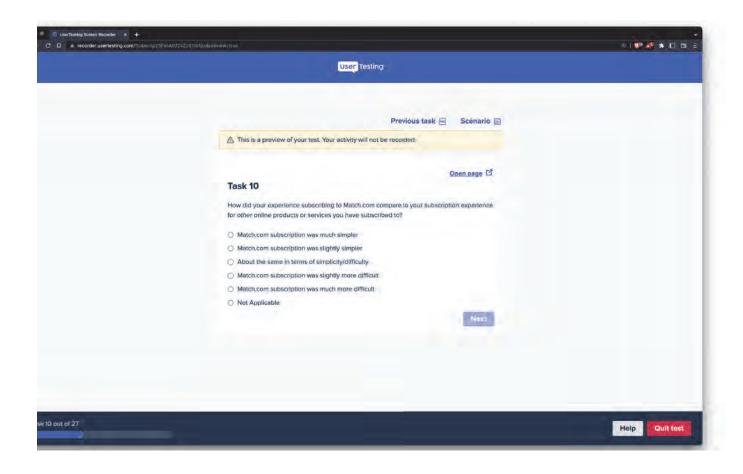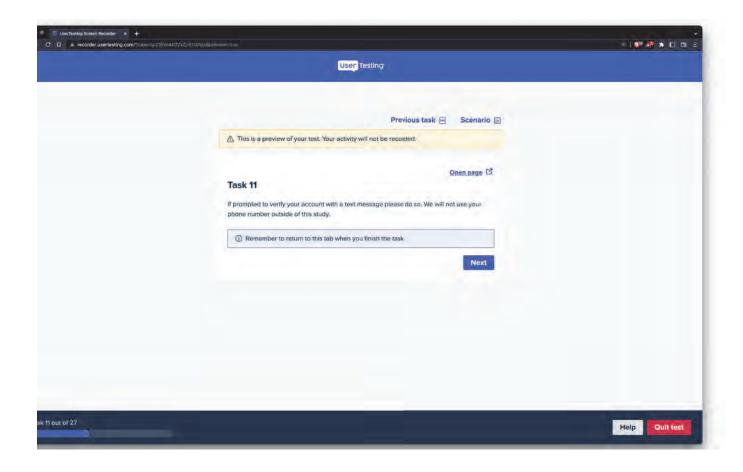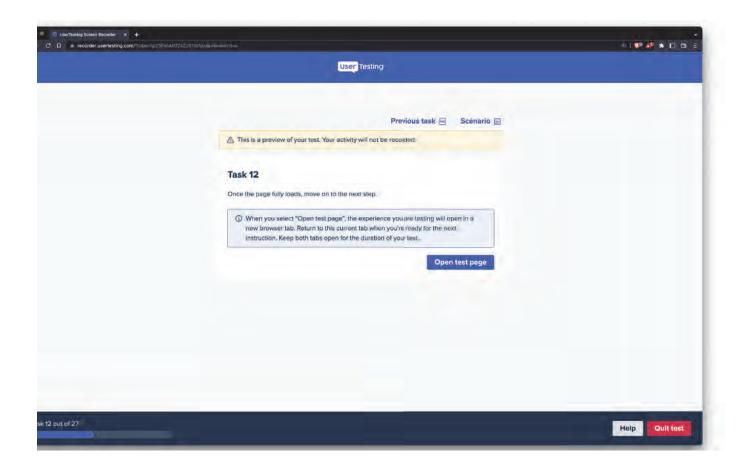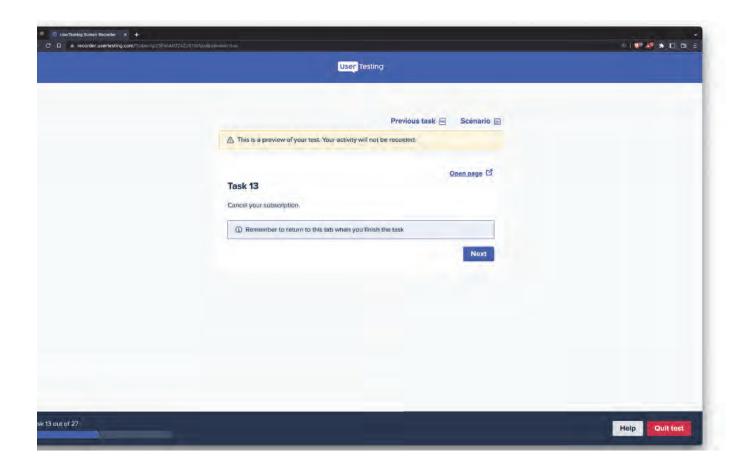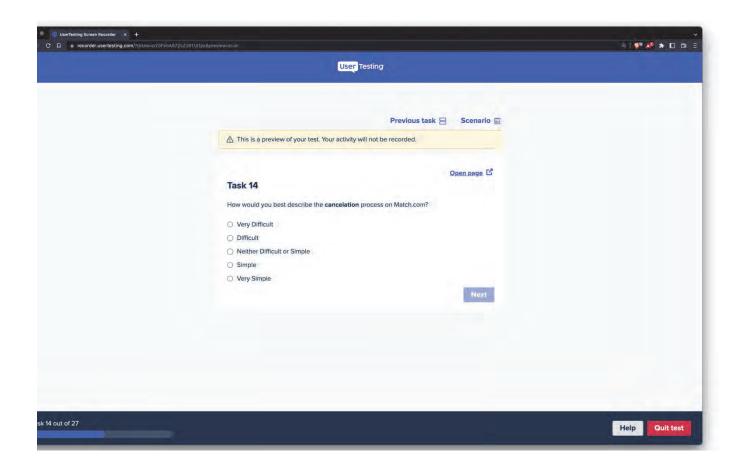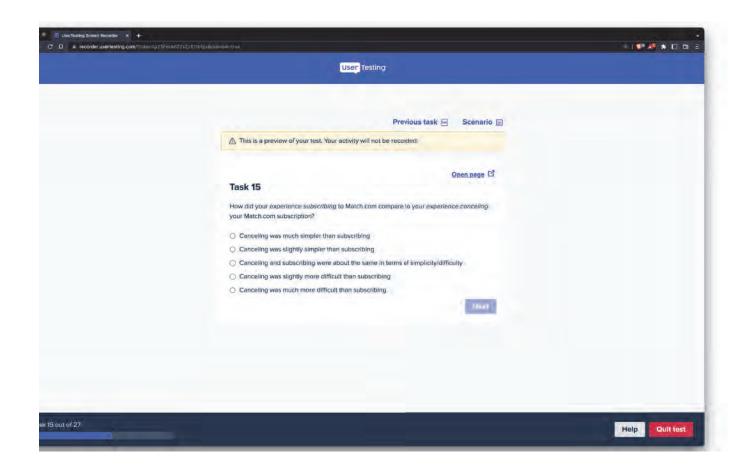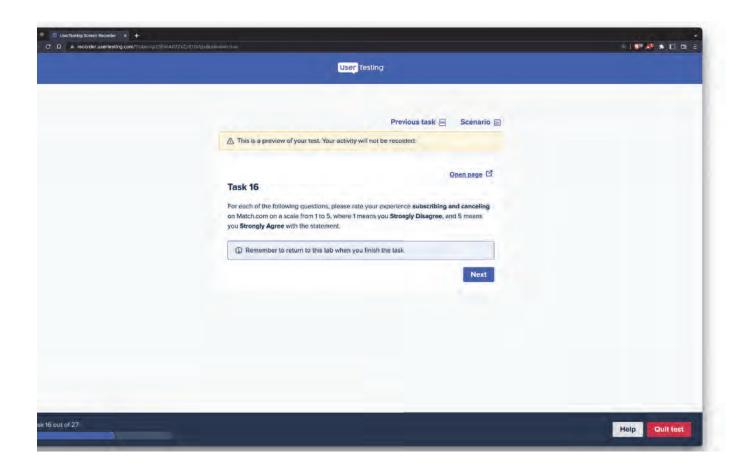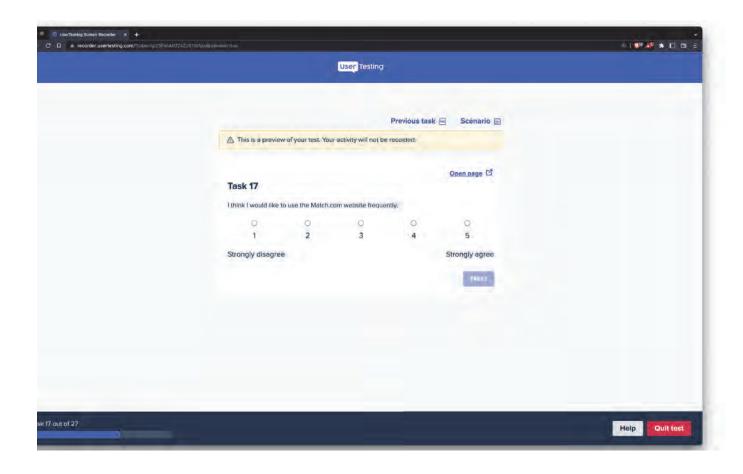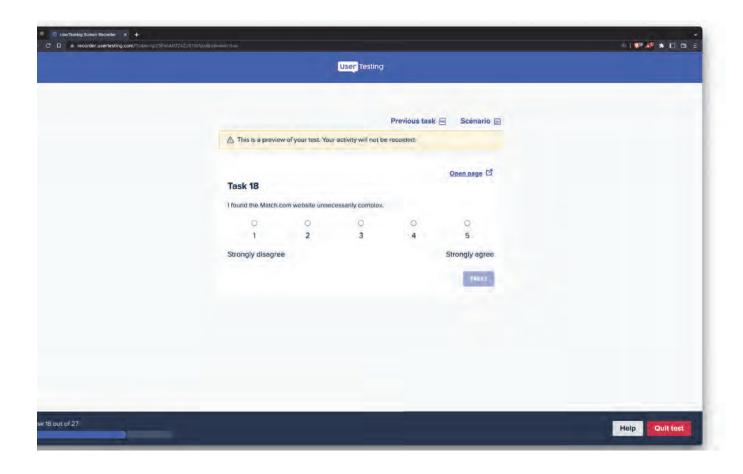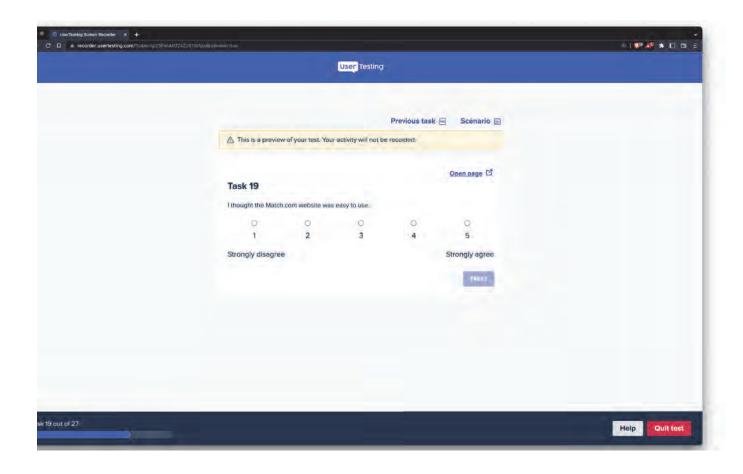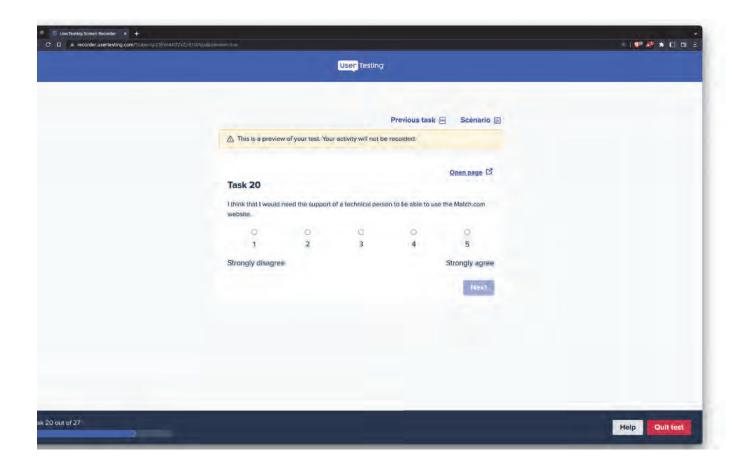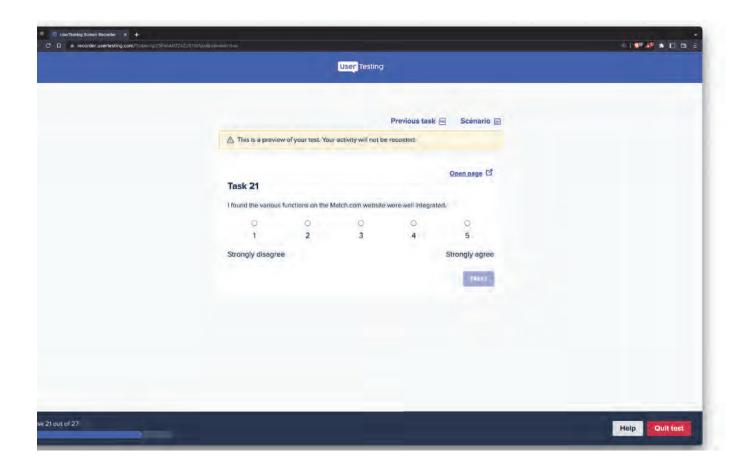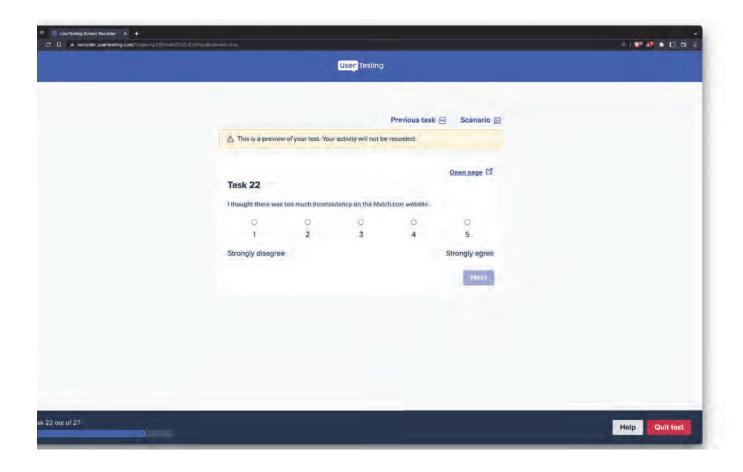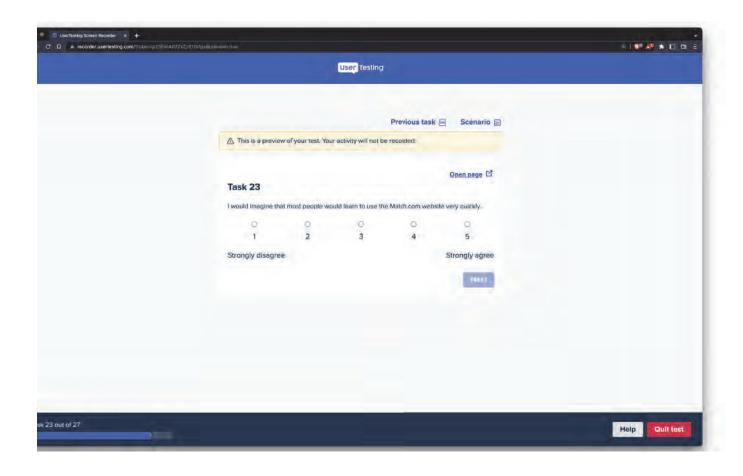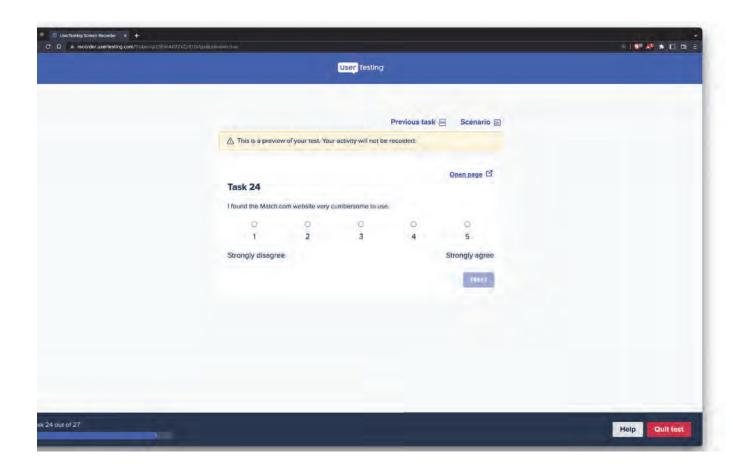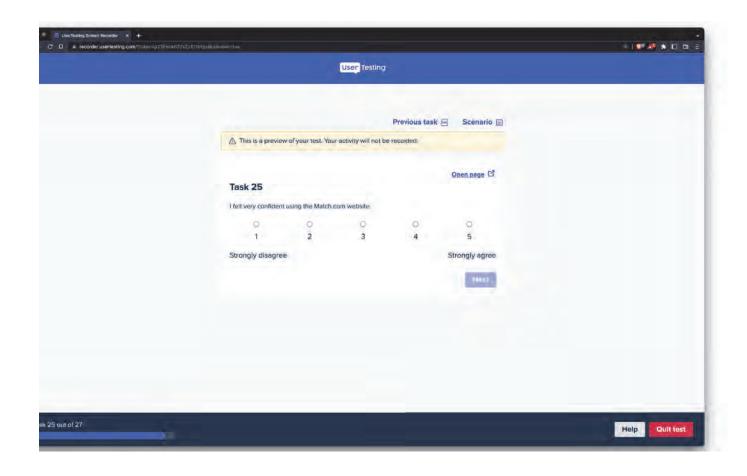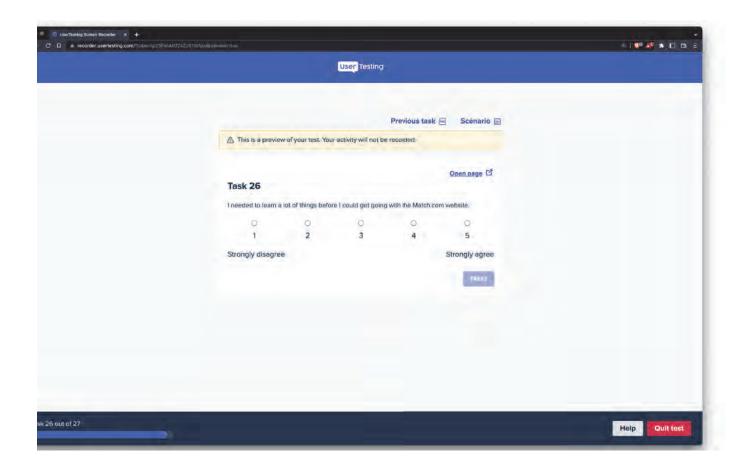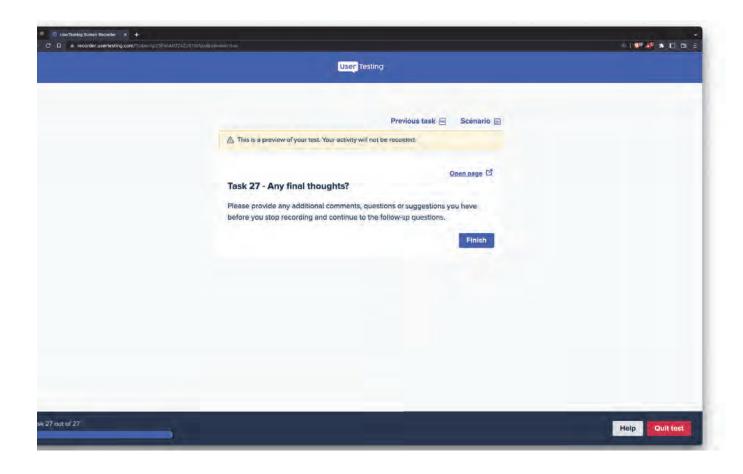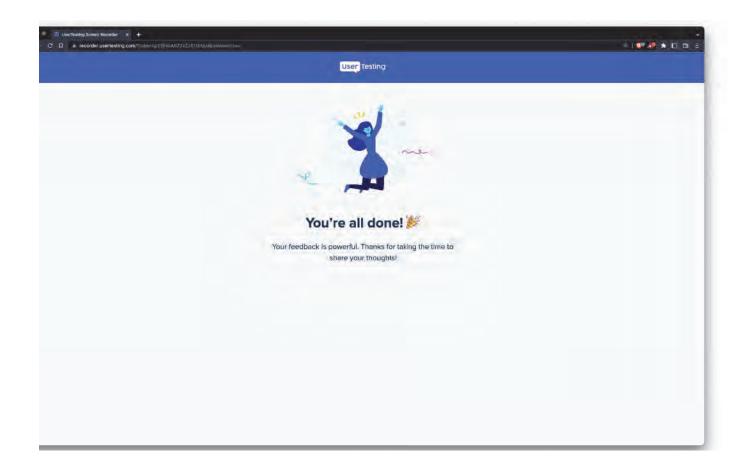
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FTC's First Amended Responses to MGI Interrogatories
F01-MG-0052356
MATCHFTC672290-672329
MATCHFTC774651
MATCHFTC774670

MATCHFTC774671
MATCHFTC774721
MATCHFTC774730
MATCHFTC774732
MATCHFTC774734
MATCHFTC774736
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MATCHFTC774741-42
MATCHFTC774745-55
MATCHFTC774760
MATCHFTC774763-64
MATCHFTC774775
MATCHFTC774790-91
MATCHFTC774796
MATCHFTC774804
MATCHFTC774809
MATCHFTC774813
MATCHFTC777081
MATCHFTC777080
MATCHFTC846468
MATCHFTC846469

F Forgot Password Flow

Figure 15—Forgot Password
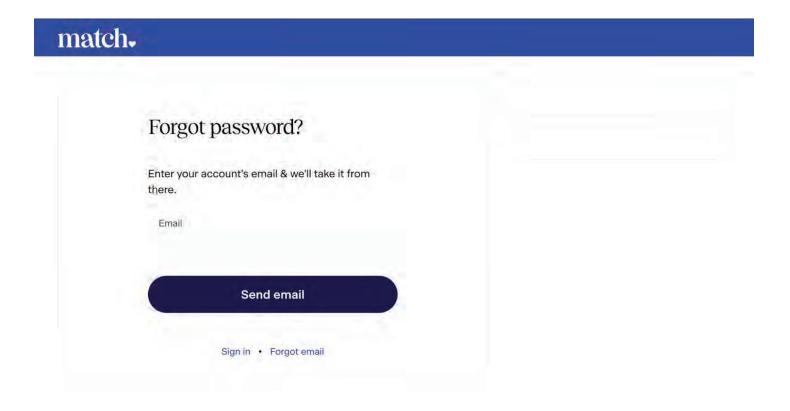
Figure 16—Password Reset Email

App. 871
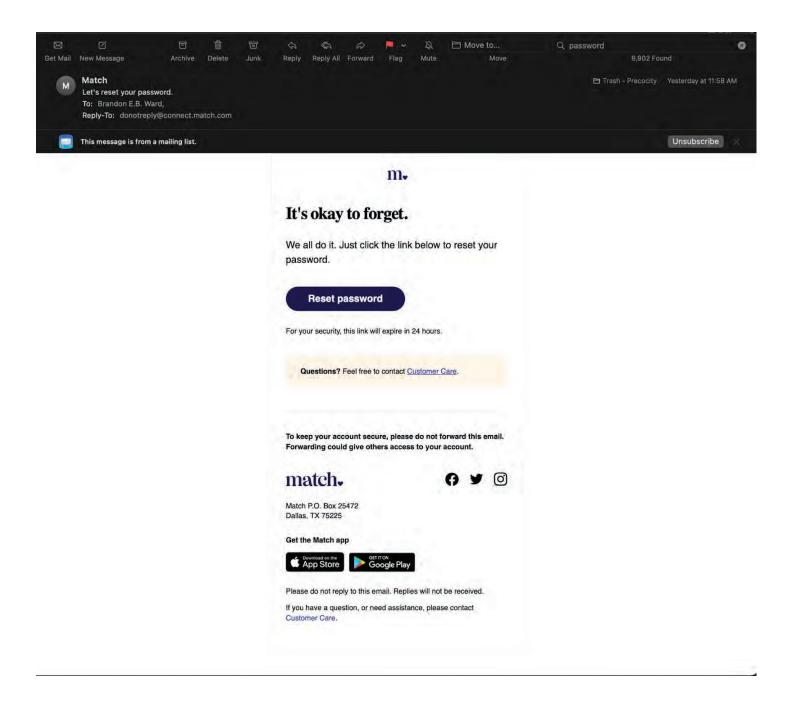
Figure 17—New Password Creation

Figure 18—Sign In Prompt
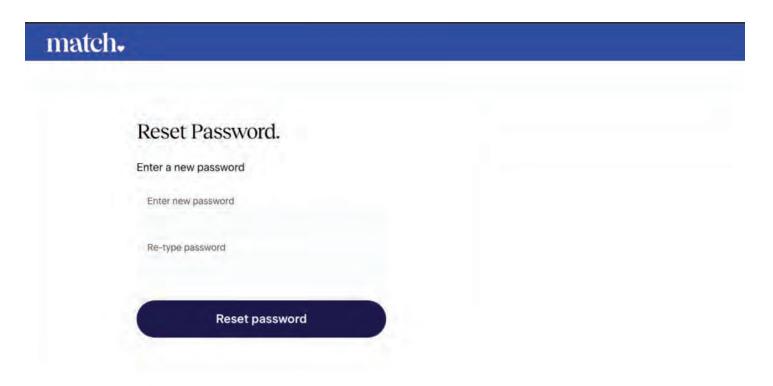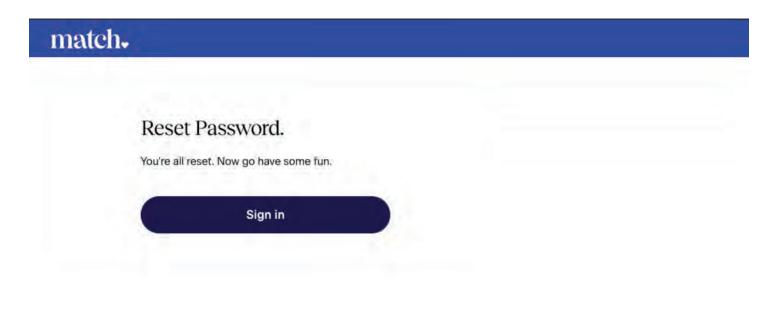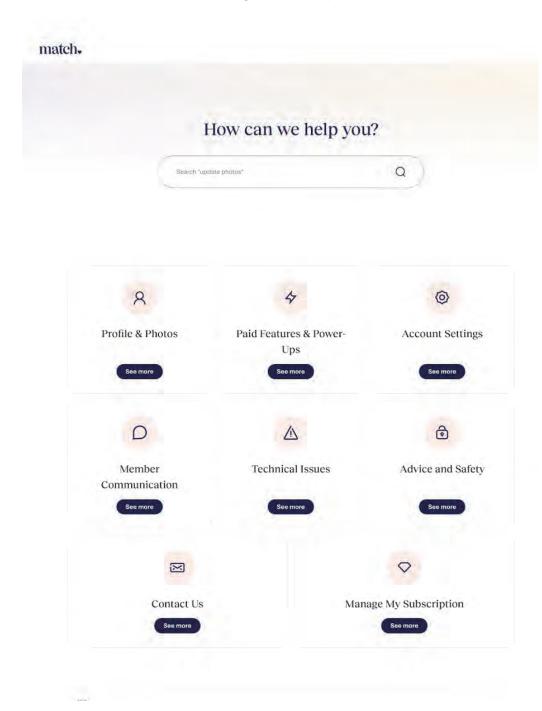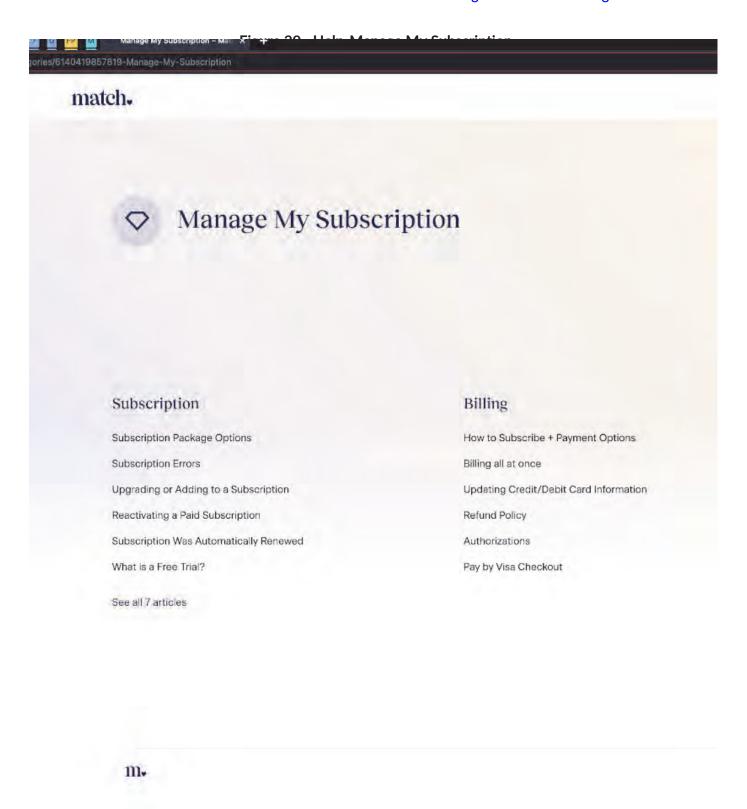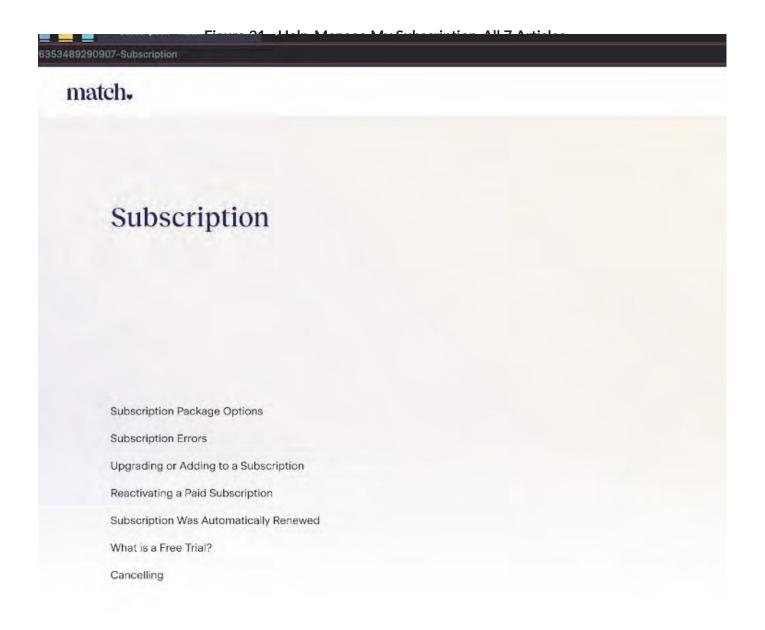
G Help Screenshots

Figure 19—Help

137 of 238

Figure 30 - Help Manage My Subscription

Figure 21 - Help Manage My Subscription, All 7 Articles

6353489290907-Subscription

match.

Subscription

Subscription Package Options

Subscription Errors

Upgrading or Adding to a Subscription

Reactivating a Paid Subscription

Subscription Was Automatically Renewed

What is a Free Trial?

Cancelling

m.

Figure 22. Help–Canceling

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ing or Adding to a
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ption Was
tically Renewed

a Free Trial?

ing

Cancelling

Cancelling a Subscription

If you don't have a paid subscription (or if you have already turned off your auto-renewal), yo
can cancel your membership by visiting the Manage Subscription section on your Account
Settings page.

When you cancel your membership, we immediately Hide your profile and photos from othe
members. Should you wish to rejoin the Match community, all you have to do is sign in and
reactivate your account.

Your information will be retained in accordance with our Privacy Policy.

If you want to cancel your subscription (turn off auto-renewal), please click here.

Cancelling Additional Features

If you purchased additional features for your subscription (like Private Mode or matchPhone,
example), you can cancel those additional features without cancelling your basic subscriptio

To cancel an additional feature, simply follow these steps.

iOS app – Canceling or Turning Off Auto Renewal:

If you purchased a Match subscription through the iOS App, any cancellations will have to be
done through Apple directly.

Follow these steps to turn off your auto-renewal on your iPhone:

1. Launch the App store on your iPhone
2. Tap on the Profile icon on the top right of the app store
3. Tap on Subscriptions
4. Tap on "Cancel Subscription" in red at the bottom of the screen
5. Tap on "Confirm" on the pop-up to save your changes.

If you would like further information or assistance, please contact Apple directly by clicking
Here.

On the Match app

1. Log in to your Match account, and tap on the 'Profile' icon at the bottom of the screen
2. Tap on the gear icon at the top of the page.
3. Tap on "Manage Account."
4. Tap on "Manage Subscription"
5. Enter your Password
6. Tap on "Subscription Status."
7. Locate the additional feature you want to cancel, and tap on the "Deactivate" link to the
   right of that feature.
8. If you're prompted to confirm that you want to cancel, tap on Yes.

On the Desktop site:

1. Log in to your Match account, and click on the gear icon in the navigation bar at the to
   the screen.
2. Click on "Manage Subscription."
3. Enter your Password
4. Click on "Subscription Status."
5. Locate the additional feature you want to cancel, and click on the "Deactivate" link to t
   right of that feature.
6. If you're prompted to confirm that you want to cancel, click on Yes.

On the Mobile Site:

1. Log in to your Match account, and tap on the 'Profile' icon at the bottom of the screen
2. Tap on the gear icon at the top of the page
3. Tap on "Manage Account"
4. Tap on "Manage Subscription."
5. Tap on "Subscription Status."
6. Locate the additional feature you want to cancel, and tap on the "Deactivate" link to the

Figure 23. Help Search

Figure 24. Help Search Results
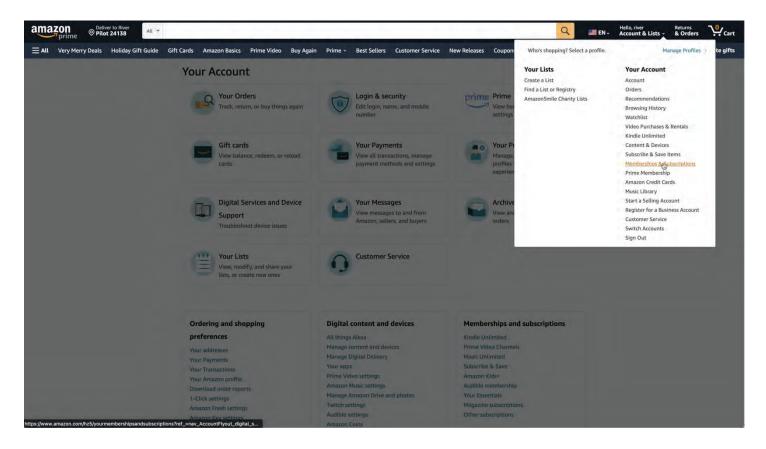
H Usability Study Raw Data

The raw data with PII removed in Excel format is available at Appendix L.
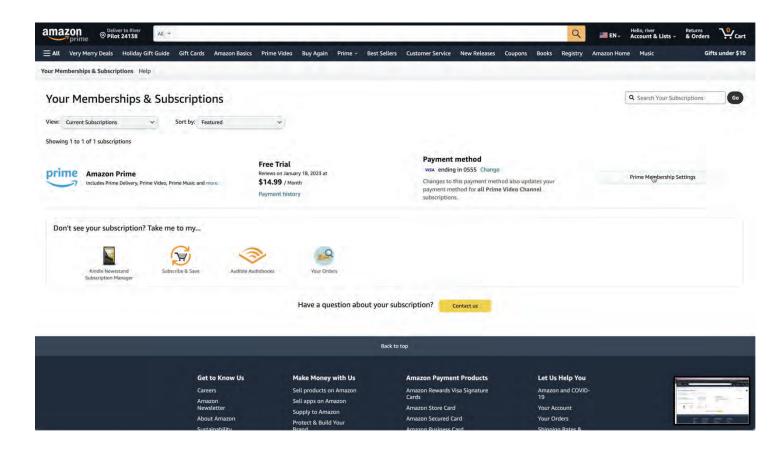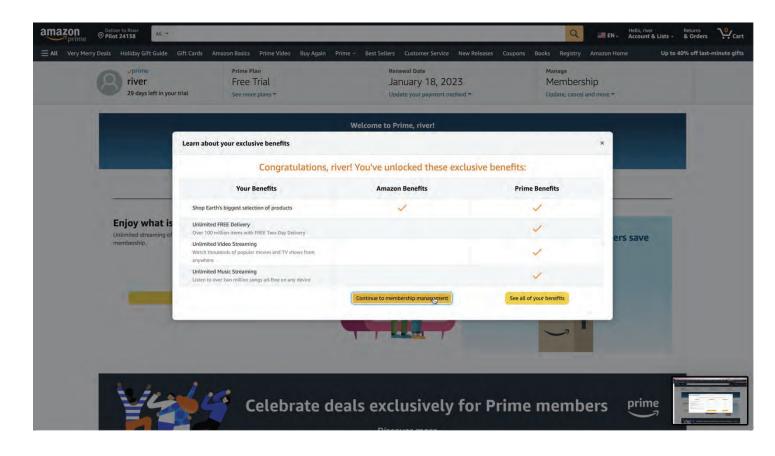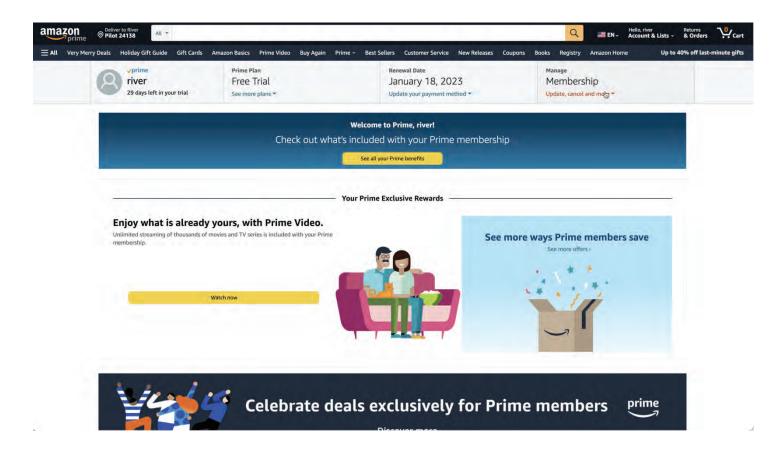
I Other Services Cancelation Screenshots

Amazon Prime

App. 881

App. 883

App. 884

App. 885

App. 886

Your Account > Manage Your Prime Membership > Edit Membership
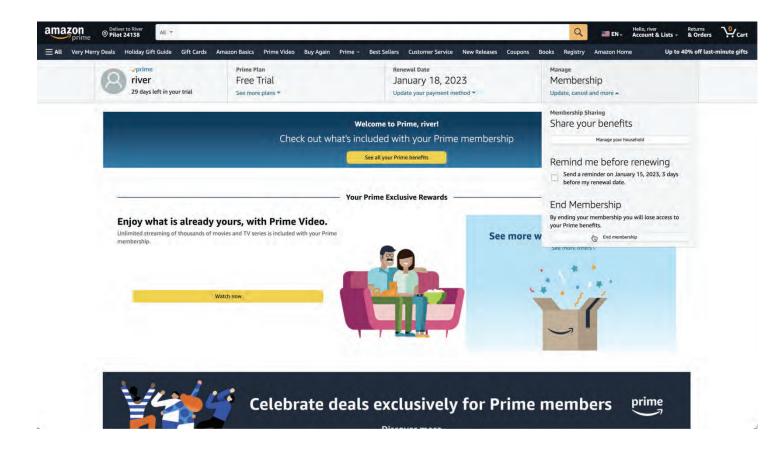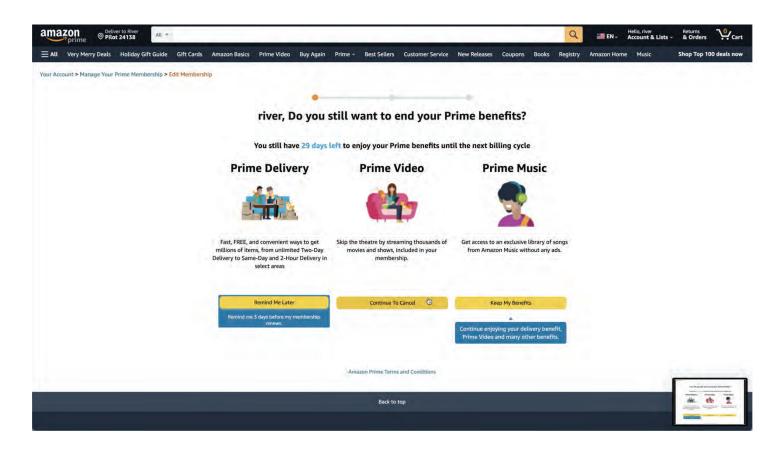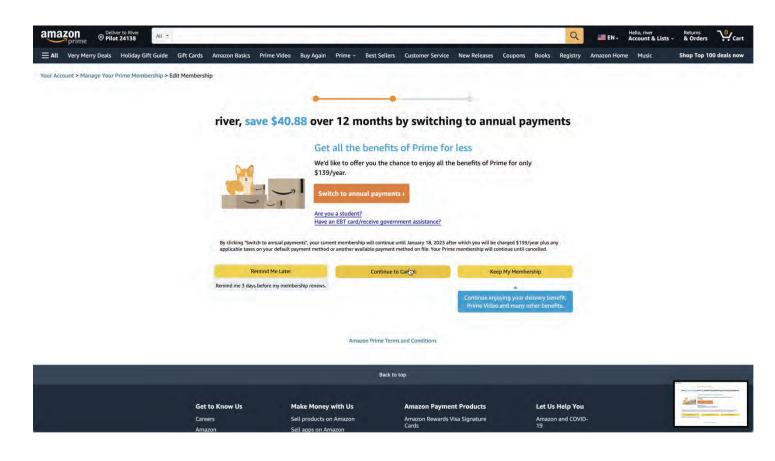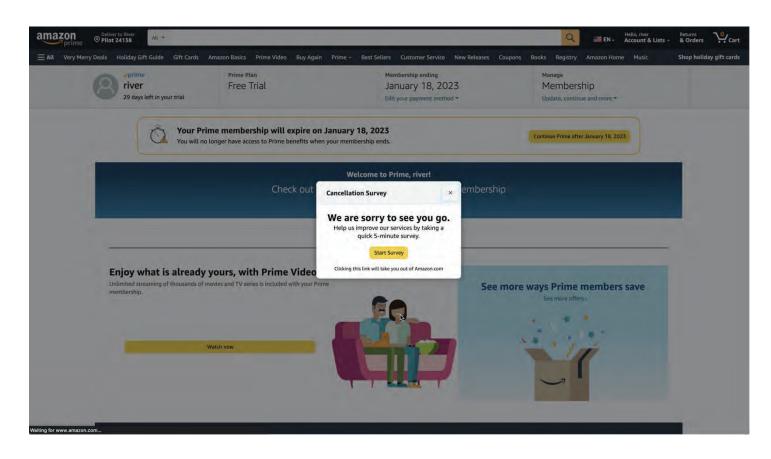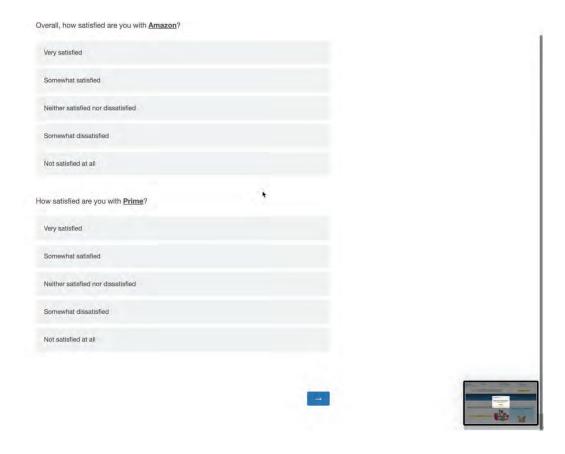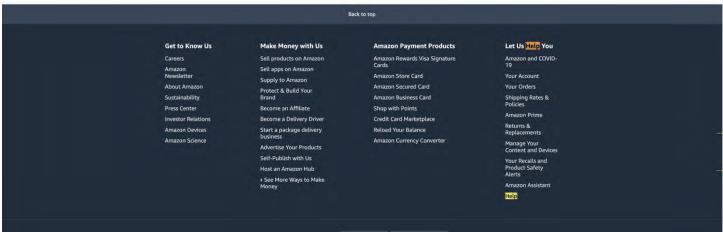
river, we're sorry to see you go. Please confirm the cancellation of your membership.

You could also consider the following:

Remind Me Later
Remind me 3 days before my free trial ends

[Remind Me Later]

Keep My Membership
You will continue enjoying all the benefits of Prime.
View everything included in Prime.

[Keep My Membership]

Pause your Prime membership:

⚠   **Items tied to your Prime membership will be affected if you pause your membership.**

1.   By pausing, you will no longer be eligible for your unclaimed **Prime exclusive offers.** Click here to see your offers.

Pause on January 18, 2023
Your benefits access will continue until January 18, 2023. After that date, your billing and benefits will be paused, and you will no longer be charged for your Prime membership. Use the quick-resume function anytime to regain access to your Prime benefits. Learn More.

[Pause on January 18, 2023]

Cancel your Prime membership:

⚠   **Items tied to your Prime membership will be affected if you cancel your membership.**

1.   By cancelling, you will no longer be eligible for your unclaimed **Prime exclusive offers.**

Cancel Membership
Your membership will end after the free trial expires on January 18, 2023.

[Cancel Membership]

Amazon Prime Terms and Conditions

App. 887

App. 888

Overall, how satisfied are you with **Amazon**?

Very satisfied

Somewhat satisfied

Neither satisfied nor dissatisfied

Somewhat dissatisfied

Not satisfied at all

How satisfied are you with **Prime**?

Very satisfied

Somewhat satisfied

Neither satisfied nor dissatisfied

Somewhat dissatisfied

Not satisfied at all

→

App. 889

After viewing product detail pages, look here to find an easy way to navigate back to pages you are interested in.

View or edit your browsing history

Back to top

Get to Know Us
Careers
Amazon Newsletter
About Amazon
Sustainability
Press Center
Investor Relations
Amazon Devices
Amazon Science

Make Money with Us
Sell products on Amazon
Sell apps on Amazon
Supply to Amazon
Protect & Build Your Brand
Become an Affiliate
Become a Delivery Driver
Start a package delivery business
Advertise Your Products
Self-Publish with Us
Host an Amazon Hub
› See More Ways to Make Money

Amazon Payment Products
Amazon Rewards Visa Signature Cards
Amazon Store Card
Amazon Secured Card
Amazon Business Card
Shop with Points
Credit Card Marketplace
Reload Your Balance
Amazon Currency Converter

Let Us Help You
Amazon and COVID-19
Your Account
Your Orders
Shipping Rates & Policies
Amazon Prime
Returns & Replacements
Manage Your Content and Devices
Your Recalls and Product Safety Alerts
Amazon Assistant
Help

Search our help library

Q Type something like, "question about a charge"

All help topics

Recommended Topics

Where's my stuff

Shipping and Delivery

Returns and Refunds

Managing Your Account

Security & Privacy

Payment, Pricing and Promotions

Devices & Digital Solutions

Amazon Business Accounts

Large Items and Heavy-Bulky Services

Other topics & Help sites

Find a missing package that shows as "Delivered"
Most packages arrive on time, but, sometimes, the tracking may show as "delivered" and you don't have your package.

Late Deliveries
Most packages arrive on time. Orders sometimes show up after the estimated delivery date.

Track your package
You can find tracking information in your order details. If an order includes multiple items, each may have separate delivery dates and tracking...

Check status of a refund
You can check the status of your refund in Your Orders .

Find a missing item from your package
If an item is missing from your package, it may have been shipped separately.

Replace an item
If you received a damaged, defective, or incorrect item sold by Amazon, you can request a replacement for a small number of eligible items through Your...

Cancel Items or Orders
You can cancel items or orders that haven't entered the shipping process yet.

Back to top

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App. 890

Search our help library

Q Type something like, "question about a charge"

All help topics

Recommended Topics

Where's my stuff

Shipping and Delivery

Returns and Refunds

Managing Your Account

Security & Privacy

Payment, Pricing and Promotions

Devices & Digital Solutions

Amazon Business Accounts

Large Items and Heavy-Bulky Services

Other topics & Help sites

Carrier Contact Information
We work with the following carriers to deliver items. If you have an issue with your delivery, you can contact the carriers directly.

Large Items and Heavy-Bulky Services

Collection Points

Amazon Prime Terms & Conditions

The Amazon Prime Membership Fee
When your free trial or membership period ends, we'll automatically charge for the next membership period.

More information on Shipping and Delivery

Delivery Guarantees
We offer guaranteed delivery on certain delivery speeds and select products. When guaranteed delivery is available on an order, we'll state this on the...

Guaranteed Delivery Terms and Conditions
If we provide a guaranteed delivery date on the checkout page, your shipping fees may be refunded if we miss our promised delivery date.

Amazon Prime benefits

End Your Amazon Prime Membership
You can end your Prime membership by selecting the **End Membership** button on this page.

---

amazon prime | Deliver to River ⊙ Pilot 24138 | All ▾ | | Q | ▦ EN ▾ | Hello, river Account & Lists ▾ | Returns & Orders | 🛒 Cart

≡ All   Very Merry Deals   Holiday Gift Guide   Gift Cards   Amazon Basics   Prime Video   Buy Again   Prime ▾   Best Sellers   Customer Service   New Releases   Coupons   Books   Registry   Amazon Home   Music   Gifts under $10

Help & Customer Service

‹ All Help Topics

Amazon Prime

Amazon Prime Benefits
Amazon Prime
Amazon Prime Membership for the Netherlands at Amazon.nl and Amazon.de
About Prime Day
About Prime Early Access Sale
Sign Up for the Amazon Prime Free Trial
Share Your Amazon Prime Benefits
Pause Your Amazon Prime Membership
End Your Amazon Prime Membership
The Amazon Prime Membership Fee
Change Your Prime or Prime Video Monthly Membership
Switch Amazon Prime Membership
Use Buy Now with Amazon Prime
Using a Promotional Code for Amazon Prime
Exchange a Prime Gift Membership
Buy a Prime Gift Membership
Buy Add-on Items
Scan the Amazon Elements Code

Find more solutions

Q

Shipping and Delivery › Amazon Prime ›

End Your Amazon Prime Membership

You can end your Prime membership by selecting the **End Membership** button on this page.

Take Action — Paid members who haven't used their benefits are eligible for a full refund of the current membership period. We'll process the refund in three to five business days.

[End Membership]

- Additional subscriptions tied to your membership won't renew once your Prime membership ends.
- If your Prime membership is associated with a service you receive through another company (such as Sprint), contact that company to manage your Prime membership.

To end your Amazon Prime membership:

1. Go to your Prime membership.
2. Select **Update, Cancel, and more**, and follow the on-screen instructions.

Was this information helpful?

Yes   No

Apple iCloud

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App. 895

App. 896

App. 898

App. 899

App. 901

App. 902

12:20   5G+

Done

Downgrade or cancel your iCloud+ plan

If you have more iCloud storage than you need, you can downgrade or cancel your iCloud+ plan.

Before you downgrade or cancel your iCloud+ plan, first download or remove content that exceeds your new storage amount. To make sure that you don't lose any information, learn how to copy what you store in iCloud.
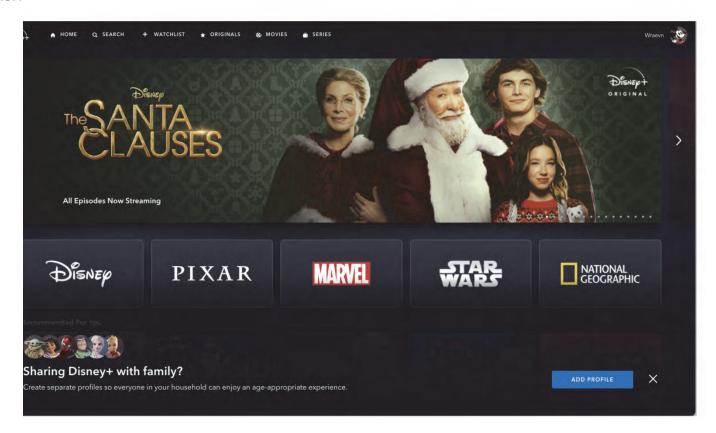
- How to downgrade or cancel your iCloud+ plan on your iPhone, iPad, or iPod touch ⌄
- How to downgrade or cancel your iCloud+ plan on your Mac ⌄
- How to downgrade or cancel your iCloud+ plan on your Windows PC ⌄

How to downgrade or cancel your iCloud+ plan on your iPhone, iPad, or iPod touch

1. Open the Settings app.
2. Tap your name.
3. Tap iCloud.
4. Tap Manage Account Storage or Manage Storage.

5. Tap Change Storage Plan.

6. Tap Downgrade Options and enter your Apple ID password.

7. Choose a different plan:
   - To downgrade your plan, choose a new storage amount.
   - To cancel iCloud+, choose the free 5GB plan or choose None.

8. Tap Done. If you can't tap Done, make sure that you're signed in with the same Apple ID that you use for your iCloud+ plan. You can also try following these steps on a different device. If you still need help, contact Apple Support.

If you downgrade or cancel your iCloud+ plan, the change takes effect after your current subscription billing period ends.[1]

How to downgrade or cancel your iCloud+ plan on your Mac

1. Choose Apple menu > System Settings. In macOS Monterey or earlier, choose

Your iCloud Plan   Your iCloud Storage   iCloud+ Features   Data Recovery   Settings

Your iCloud Plan

iCloud+ with 50GB storage
$0.99/month

Includes

- 50GB of storage

Premium

- Private Relay
- Hide My Email
- Custom Email Domain
- Support for one HomeKit Secure Video Camera
- Family Sharing

Apps and Features

- iCloud Photos
- iCloud Drive
- iCloud Backup
- iCloud Mail
- iCloud Passwords and Keychain

See all apps and features that use iCloud ↗

How to Change Your iCloud Plan

Use Continue on Device to send a notification to your Apple devices that will take you directly to iCloud Plan Settings.

⬜ Continue on Device...

View iCloud+ Plans ↗

 iCloud   Your iCloud Plan

Disn

Disney+ Help Center

Q Have a question about Disney+?

Popular help articles

About Disney+	>	Login issues	>
Watch Disney+ on your TV	>	Birthdate and gender	>
Update payment	>	Disney+ pricing	>

All topics

Getting Started

Account & Billing

Supported Devices

Watching Disney+

Fix a Problem

Error Codes

App. 916

Disney+   Help Center

Q Have a question about Disney+?

Disney+ Help Center > Account & Billing > Canceling Disney+

Canceling Disney+

Disney+ subscribers have the ability to cancel or switch their subscription at any time. Please keep in mind that canceling your Disney+ subscription will not delete your Disney+ account or the Disney account you use for other products and experiences from The Walt Disney Company, if applicable.

Select the scenario below that best applies for more information:

- I want to cancel my Disney+ subscription
- I subscribe to the Disney Bundle and want to cancel
- I canceled and want to restart my Disney+ subscription
- I want to delete my Disney+ account

Cancel my Disney+ subscription

If you're billed directly by Disney+ and would like to cancel your subscription (steps may vary for subscribers billed through a third-party):

1. Log in to your Disney+ account through a computer or mobile browser
2. Select your Profile
3. Select **Account**
4. Select your Disney+ subscription under **Subscription**
5. Select **Cancel Subscription**
6. Select **Cancel Subscription**

You'll continue to have access to Disney+ until the end of your current billing cycle but will not be charged moving forward. We do not refund or credit for partially used billing periods.

Third-Party Billing

If you signed up for Disney+ through a third party, the steps to cancel your subscription may vary. Navigate to your third-party's help center or contact them to learn more.

BACK TO TOP

SUGGESTED ARTICLES

Updating payment information

Billing partnerships on Disney+

Deleting my Disney+ account

Payment methods for Disney+

Why does Disney+ need my birthdate and gender?

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eHarmony

App. 918

App. 919

eharmony

Tour   Dating Advice

🏠 Homepage   👥 Matches   💬 Messages

Manage profile

⚙ Manage profile

👤 Personal data

💡 Notification options

🛡 SMS Verification

Your subscription: 3-month plan
Purchased Dec 19, 2022 (Pacific Time)

If you cancel automatic renewal of your subscription, your Premium Membership will terminate at the end of your current subscription term. Your profile will still be available and visible, but you will not be able to respond to match communications, send messages to other members, view match photos or access old match messages. If you plan to continue communicating with your existing matches offline, keep in mind that you will not continue to benefit from eharmony's secure and anonymous service.

To keep the benefits of a Premium Membership, your subscription will automatically renew on for the term specified in your order confirmation. You can cancel automatic renewal at any time before the last day of your current subscription term.

The new subscription period you have selected will begin at the end of your current subscription period.

Please click here if you wish to cancel automatic renewal of your current subscription.

About us • Terms & conditions • Privacy policy • Help • Safety • Affiliates

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App. 920

eharmony

Tour   Dating Advice

🏠 Homepage   👥 Matches   💬 Messages

Manage profile

Your auto-renewal was turned off

Your premium membership will not automatically renew and is scheduled to end on Mar 21, 2023 (Pacific Time).

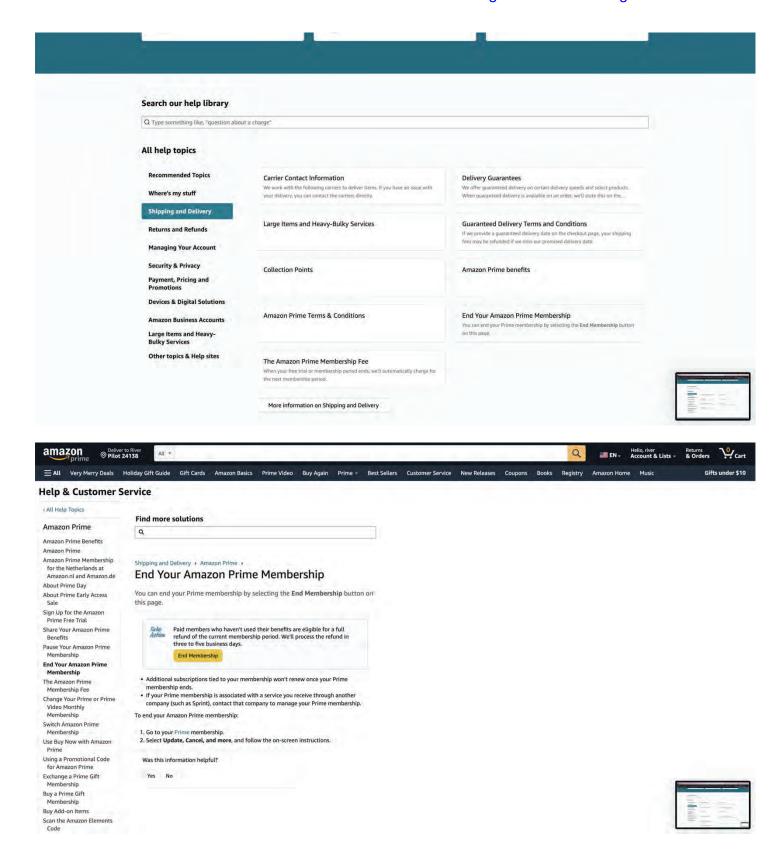Please note that, for technical reasons, it may take up to 12 hours for your cancellation to be reflected in your account. You may see the cancellation reflected sooner if you log out of your account and log back in.

‹ To my homepage

⚙ Manage profile

👤 Personal data

💡 Notification options

🛡 SMS Verification

About us • Terms & conditions • Privacy policy • Help • Safety • Affiliates

App. 923

HOW CAN WE HELP YOU?

Enter your question

HOW DO I CANCEL MY SUBSCRIPTION?

You can turn off your account's automatic renewal feature and by doing so, your subscription will expire at the end of its term. Keep in mind that once your subscription expires, you will lose the ability to read and write custom messages with matches and view their photos. So, before turning it off, we ask that you consider giving our unique process the opportunity and time to work for you.

For subscriptions purchased on the web, turn the automatic renewal off by following the steps below:
1. Log into your account
2. Click on the down-arrow next to your portrait at the top of the screen to open the dropdown menu
3. Click the "Data & settings' link
4. Click on "Amend subscription"
5. Enter your password for verification
6. Read through the details about canceling your auto-renewal and click the link at the bottom of the page to begin the cancellation process. This button will only turn off the automatic renewal feature - your current subscription will still run its full term. (IF YOU HAVE REMAINING PAYMENTS, YOU WILL STILL BE CHARGED THOSE PAYMENTS.)
7. Go through to the confirmation page

For subscriptions purchased through iTunes (Apple)

Apple does not provide developers with direct access to manage subscriptions purchased through iTunes. All subscriptions purchased through Apple must be managed through your iTunes subscription settings. We recommend reaching out to Apple directly if you need assistance with updating your renewal.

For subscriptions purchased through the Google Play App (Android)

Important: When you uninstall the app, your subscription won't cancel.

1. Open the Google Play app
2. At the top right, tap the profile icon.
3. Tap Payments & subscriptions > Subscriptions.
4. Select the subscription you want to cancel.
5. Tap Cancel subscription.
6. Follow the instructions.

Our Customer Care team can also be reached Monday - Friday between the hours of 8:30 AM - 5:00 PM Pacific

Intuit Quickbooks

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Account and Settings   ⓘ Help ✕

Company	Company name			✎
Billing & subscription				
Usage		Company name	No company name	
Sales		Legal name	Same as company name	
Expenses		EIN/SSN		
Payments	Company type	Tax form	-	✎
Advanced		Industry	-	

Contact info	Company email	jd.coomer@yahoo.com	✎
	Customer-facing email	Same as company email	
	Company phone	-	
	Website	-	

| Address | Company address | 701 Valle Vista Dr, Athens, TX 75751-2731 | ✎ |

| Address | Customer-facing address | Same as company address | ✎ |

| Address | Legal address | Same as company address | ✎ |

| Communications with Intuit | Marketing Preferences | |

Account and Settings   ⓘ Help ✕

Company	Company ID	9130 3556 0968 6216
Billing & subscription	Payment Method	**VISA** Visa *5572 (expires 07/2026) ✎
Usage		

QuickBooks Simple Start
SUBSCRIBED Next charge on 01/20/2023

~~$30~~ **$15**/mo
+ applicable taxes
Upgrade your plan
View payment history
Cancel subscription
Switch to annual billing

QuickBooks Live Bookkeeping Setup
ONE-TIME SERVICE Expires on 01/19/2023

QuickBooks Online Payroll
Pay employees and contractors with free 24-hour direct deposit.

- Automatic tax calculations on every paycheck
- File and pay federal and state payroll taxes
- Employees can view pay stubs and W-2s online

ⓘ When you subscribe to Payroll, a QuickBooks Time subscription will also be included at no extra cost.

[Learn more]

QuickBooks Live Full-Service Bookkeeping
Get live support from a dedicated, QuickBooks-certified bookkeeper who will:

- Go through your past books line by line to bring them up to date
- Maintain your books each month so you're ready for tax time
- Meet with you one-on-one to provide ongoing insights on your business

[Learn more]

QuickBooks Time
Track time on any device to streamline payroll, send accurate invoices, and save thousands each year.

- Let employees clock in and out from their devices
- Build, edit, and share schedules by jobs or shifts
- Automatically add employee timesheets for faster, more accurate time entry

QuickBooks Online Payments
Accept payments online or in person.

- Customers can pay by credit, debit card, Apple Pay, or bank transfer
- Your books are reconciled automatically

VISA ● ▬ ▬ ●Pay | BANK

Checks and supplies
Get the products you need to help run your business easily and effectively.

- Choose from popular check styles
- Make tax time less taxing with our tax kits
- Reordering is a snap

Cancel QuickBooks Simple Start   ✕

Are you sure you want to cancel?

If you cancel today:

- You can use **QuickBooks Simple Start** until the end of your current billing period, **01/20/2023.**

- Your **QuickBooks Live Bookkeeping Cleanup** service will expire on .

- You can view your data as long as you have another active subscription. If you don't have another subscription, you can still view your data for one year after your subscription ends.

[Don't cancel]   (Continue to cancel)

                                                                                                                                  ✕

Back to Billing & subscription   Skip survey and cancel

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LastPass

App. 931

App. 932

App. 933

HELP FILE

How do I cancel automatic renewal for LastPass Premium?

At any time, you can cancel the next upcoming renewal of your LastPass Premium subscription plan. Once your plan expires, your account will downgrade to a LastPass Free account, and you will lose access to LastPass Premium features.

Don't worry! If you change your mind, you can reactivate your LastPass Premium subscription whenever you'd like – if there is still subscription time left, it will be reinstated when you reactivate.

⚡ **Tip:** As a best practice, it is highly recommended that you export your passwords and stored data before canceling.

Canceling your subscription purchased via the LastPass website

If you purchased LastPass directly via our website using a credit/debit card, you can cancel your upcoming renewal from My Account.

1. Log in to LastPass and access your vault by doing either of the following:

    ○ In your web browser toolbar, click the LastPass icon ▣ and select **Vault** or **Open My Vault**.

    ○ Go to https://lastpass.com/?ac=1 and log in with your email address and master password.

2. Select **Account Settings** in the left navigation.

3. In the *Links* section, select the **My Account** hyperlink.

4. In the Premium Status section, click **Cancel**.

Need help?

Contact Support

Rate your Experience

← Back

Print

App. 934

LinkedIn Premium

in

Settings

- **Account preferences**
- Sign in & security
- Visibility
- Data privacy
- Advertising data
- Notifications

Profile information

Name, location, and industry →

Personal demographic information →

Display

Dark mode →

General preferences

Language →

Content language →

Autoplay videos   On →

Showing profile photos   All LinkedIn members →

Feed preferences   On →

People also viewed   On →

People you unfollowed →

Syncing options

Sync calendar →

Sync contacts →

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Netflix

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NETFLIX

John ▼

Help Center

🔍 What do you need help with?

Hi, John
Recommended for you

🗎 How to keep your account secure   🗎 Parental controls on Netflix   🗎 How to change your plan

Manage My Account

Plans and Pricing

I received an email stating
there was a new sign-in to
my account

How to change your plan

Can't Watch

How to change your Netflix
password

Netflix says to sign up
when trying to sign in

Netflix says 'This app is not
compatible with your
device.'

Billing Questions

How to pay for Netflix

Billing and Payments

Netflix Gift Cards

Watching Netflix

How to create, change, or
delete profiles

How to watch Netflix on
your TV

How to download titles to
watch offline

Quick Links

Request TV shows or movies ›

Update email ›

Update password ›

Update payment method ›

Cancel account ›

Review payment history ›

Want to contact us?

[CALL US]   [START LIVE CHAT]

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New York Times

U.S.   INTERNATIONAL   CANADA   ESPAÑOL   中文

GIVE THE TIMES   Account ⌄

Monday, December 19, 2022
Today's Paper

The New York Times

38°F   39° 21°
S&P 500   -0.9% ↓

World   U.S.   Politics   N.Y.   Business   Opinion   Tech   Science   Health   Sports   Arts   Books   Style   Food   Travel   Magazine   T Magazine   Real Estate   Video

LIVE   **Russia-Ukraine War** 10m ago   **Jan. 6 Committee Meeting** 12m ago

Jan. 6 Panel Backs Four Criminal Referrals Against Trump

LIVE   12m ago

Accuses Him of Insurrection, Obstruction and Conspiracy

· The House committee accused former President Trump of federal crimes as it referred him to the Justice Department for potential prosecution.

· The action is the coda to the panel's 18-month investigation into Mr. Trump's effort to overturn the 2020 election that culminated in the Capitol attack.

See new updates 6+

Key Moments From Jan. 6 Hearing

Hope Hicks Testimony

with ex-President Trump on this topic.

● ● ● ● ● ●

‹ ›

Analysis: Will the Justice Dept. Take Up the Charges? It's Unclear.

The department is under no obligation to adopt the recommendations, and not much is publicly known about charges that the special counsel might consider.
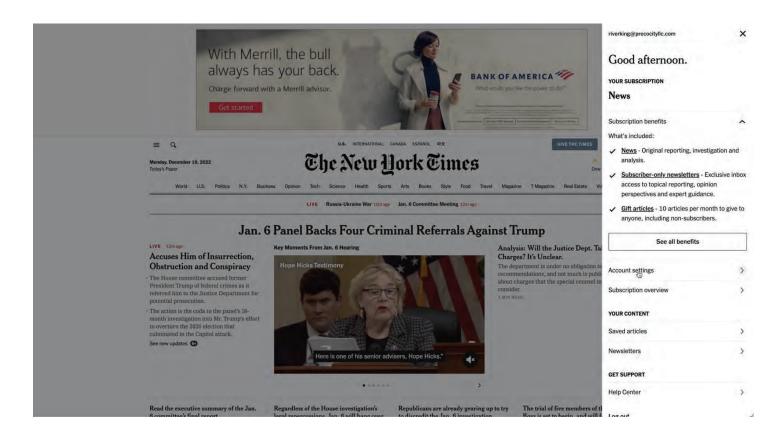
3 MIN READ

Read the executive summary of the Jan. 6 committee's final report

Regardless of the House investigation's legal repercussions, Jan. 6 will hang over

Republicans are already gearing up to try to discredit the Jan. 6 investigation

The trial of five members of the Proud Boys is set to begin, and will focus on

App. 952

App. 953

The New York Times

13:29

Account

Subscription overview

Billing history

Email and settings

❓ Help

Good afternoon.
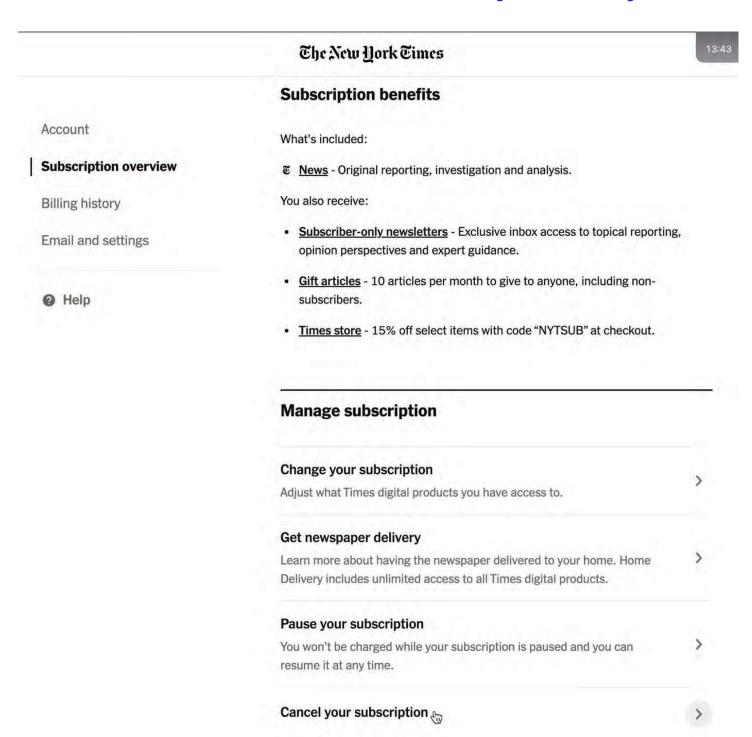
You've supported independent journalism since 2022.

Your profile

Account number
204370646

Email address   Update
riverking@precocityllc.com

Password   Create
None

Connected accounts   Manage
Google

Your subscriptions

News

~~$17~~ $4 every 4 weeks

Access to reporting, investigation and
analysis, online and in The New York
Times app.

Manage subscription

Change subscription

App. 954

The New York Times   13:40

Subscription benefits

Account

Subscription overview

Billing history

Email and settings

❓ Help

What's included:

ₜ **News** - Original reporting, investigation and analysis.

You also receive:

- **Subscriber-only newsletters** - Exclusive inbox access to topical reporting, opinion perspectives and expert guidance.

- **Gift articles** - 10 articles per month to give to anyone, including non-subscribers.

- **Times store** - 15% off select items with code "NYTSUB" at checkout.

Manage subscription

Change your subscription
Adjust what Times digital products you have access to.   >

Get newspaper delivery
Learn more about having the newspaper delivered to your home. Home Delivery includes unlimited access to all Times digital products.   >

Pause your subscription
You won't be charged while your subscription is paused and you can resume it at any time.   >

Cancel your subscription 🖑   >

App. 955

The New York Times   13:43

Subscription benefits

Account

Subscription overview

Billing history

Email and settings

❓ Help

What's included:

𝕮 **News** - Original reporting, investigation and analysis.

You also receive:

- **Subscriber-only newsletters** - Exclusive inbox access to topical reporting, opinion perspectives and expert guidance.

- **Gift articles** - 10 articles per month to give to anyone, including non-subscribers.

- **Times store** - 15% off select items with code "NYTSUB" at checkout.

Manage subscription

Change your subscription   >
Adjust what Times digital products you have access to.

Get newspaper delivery   >
Learn more about having the newspaper delivered to your home. Home
Delivery includes unlimited access to all Times digital products.

Pause your subscription   >
You won't be charged while your subscription is paused and you can
resume it at any time.

Cancel your subscription 🖐   >

App. 956

The New York Times

Step 1 of 4

Please tell us why you'd like to cancel your News subscription.

Reason

Select reason for cancellation ⌄

Is there more you'd like to tell us? We'll use your feedback to improve.

Feedback (optional)

400 characters left

Return to my account   Continue

App. 957

The New York Times

Step 2 of 4

You've supported journalism that fueled conversations around the world.

Airstrikes Gone Wrong

Read the Times article that revealed hidden casualties in thousands of American military airstrikes and won the 2022 Pulitzer Prize for International Reporting.

The 36 Questions That Lead to Love

Answer 36 questions explored in our Modern Love column that might accelerate intimacy between strangers, then watch a few couples test it out.

The Latecomer's Guide to Crypto

Crypto is a lot of things - including terribly explained. See how we've cleared it up for you.

Sheet-Pan Every-thing

Discover 20 often surprising, always delicious recipes for the most versatile pan in your kitchen.

Return to my account   **Continue to cancel**

App. 958

The New York Times

Step 3 of 4

Continue your subscription at the current rate, and keep your Times access.

Current subscription

News

$1 a week
Billed as $4 every 4 weeks

Available offers

○ Yes, I want to keep my subscription at the current rate.

$1 a week for another year
Billed as $4 every 4 weeks until December 18, 2023

○ No thanks, just cancel my News subscription.

[Return to my account]   [Confirm]

App. 959

The New York Times

Step 3 of 4

Continue your subscription at the current rate, and keep your Times access.

Current subscription

News

$1 a week
Billed as $4 every 4 weeks

Available offers

○ Yes, I want to keep my subscription at the current rate.

$1 a week for another year
Billed as $4 every 4 weeks until December 18, 2023

◉ No thanks, just cancel my News subscription.

BILLING INFORMATION
When you cancel, we will stop charging your account the following billing cycle. Each billing cycle is 4 weeks. Your access will continue until the end of your current billing cycle.

Return to my account   Confirm

App. 960

The New York Times
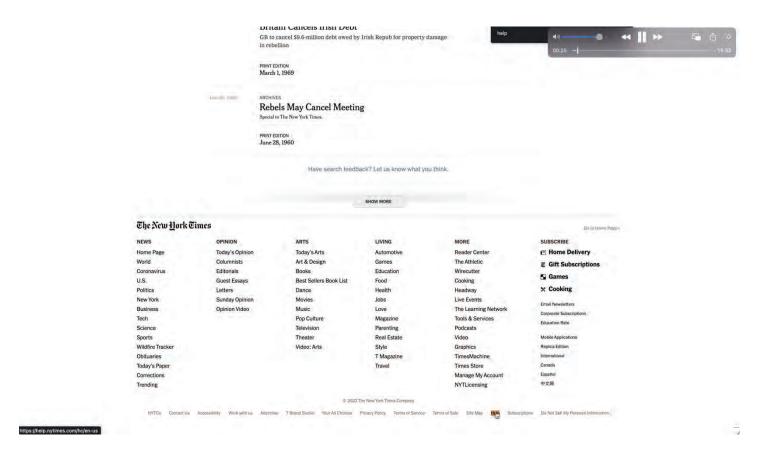
Step 4 of 4

You've canceled your News subscription.

You'll continue to have access until the end of your current billing cycle on January 16, 2023. After this, you can reactivate your subscription at any time.
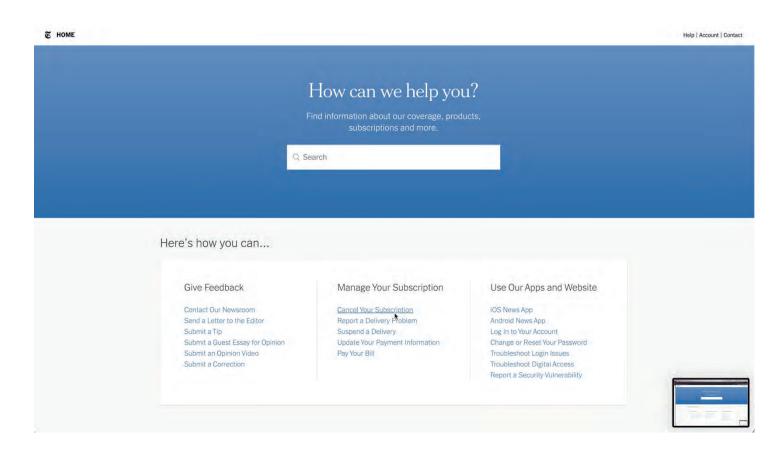
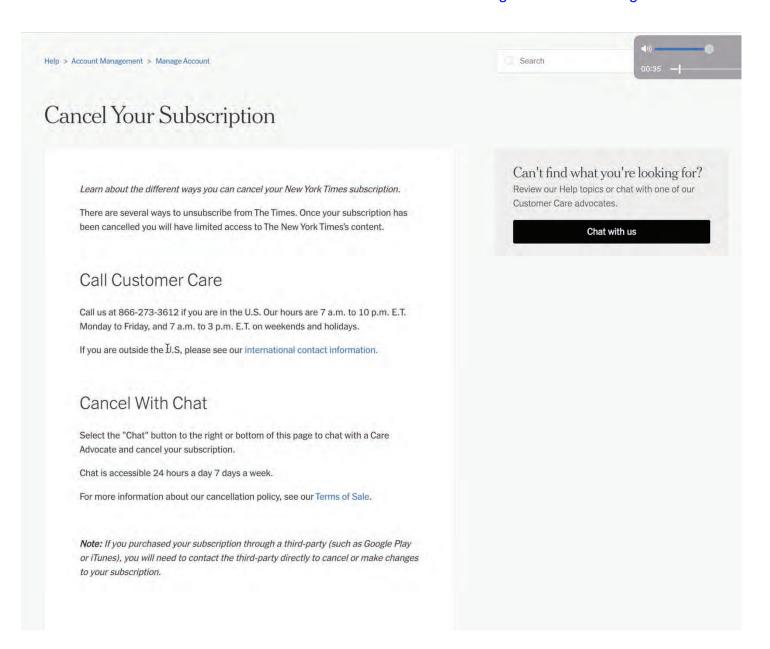We've sent a confirmation email to **riverking@precocityllc.com**.

Return to my account
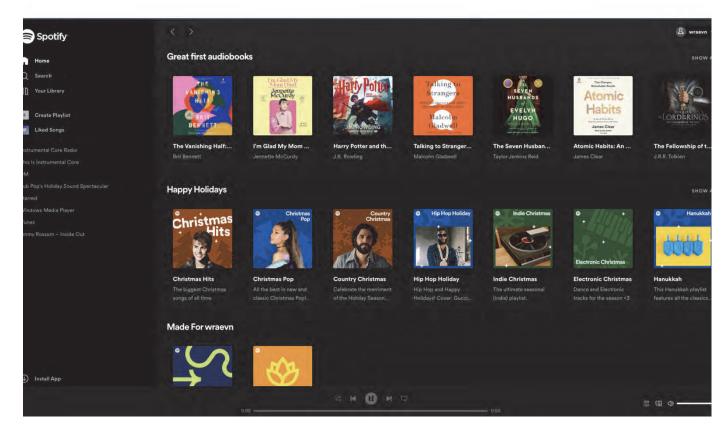
Help us improve. Tell us about this experience.

App. 961

Britain Cancels Irish Debt

GB to cancel $9.6-million debt owed by Irish Repub for property damage in rebellion

PRINT EDITION
March 1, 1969

ARCHIVES

Rebels May Cancel Meeting

Special to The New York Times.

PRINT EDITION
June 28, 1960

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Science		Television	Parenting	Podcasts	
Sports		Theater	Real Estate	Video	Mobile Applications
Wildfire Tracker		Video: Arts	Style	Graphics	Replica Edition
Obituaries			T Magazine	TimesMachine	International
Today's Paper			Travel	Times Store	Canada
Corrections				Manage My Account	Español
Trending				NYTLicensing	中文网

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https://help.nytimes.com/hc/en-us

CONFIDENTIAL—FTC v. MATCH.COM

App. 962

Help > Account Management > Manage Account

Search

00:35

Cancel Your Subscription

Learn about the different ways you can cancel your New York Times subscription.

There are several ways to unsubscribe from The Times. Once your subscription has been cancelled you will have limited access to The New York Times's content.

Call Customer Care

Call us at 866-273-3612 if you are in the U.S. Our hours are 7 a.m. to 10 p.m. E.T. Monday to Friday, and 7 a.m. to 3 p.m. E.T. on weekends and holidays.

If you are outside the U.S, please see our international contact information.

Cancel With Chat

Select the "Chat" button to the right or bottom of this page to chat with a Care Advocate and cancel your subscription.

Chat is accessible 24 hours a day 7 days a week.

For more information about our cancellation policy, see our Terms of Sale.

Note: If you purchased your subscription through a third-party (such as Google Play or iTunes), you will need to contact the third-party directly to cancel or make changes to your subscription.

Can't find what you're looking for?

Review our Help topics or chat with one of our Customer Care advocates.

Chat with us

Spot

App. 972

Spotify

Premium   Support   Download | Profile ⌄

Home > Plan Help >

Cancel Premium plans

Cancel your Premium plan any time on your account page.

1. Log into spotify.com/account.
2. Under **Your plan**, click **CHANGE PLAN**.
3. Scroll to **Cancel Spotify** and click **CANCEL PREMIUM.**

Your Premium stays until your next billing date, then your account switches to free.

You keep your playlists and saved music when your account is free. You can also still log in and play with ads.

No option to change plan?

This means your plan is associated with a partner company (e.g. your mobile or internet provider). To cancel, find their contact link on your account page under **Payment**.

If you pay through iTunes, see Apple's steps to cancel.

Account on Spotify Free?

This means there's no Premium plan to cancel, and there's no payment info on the account.

If you're being charged, you likely have Premium on a different account. Try logging out and back in with different details.

Note: You can also cancel by completing this form and sending it to Spotify.
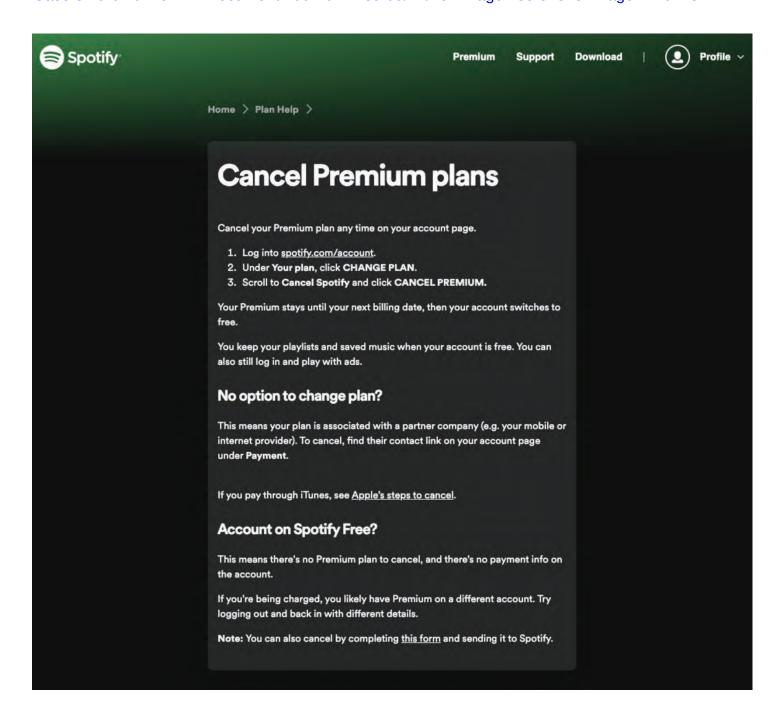
App. 974

EXHIBIT 58

Expert Report of Dr. Jennifer King

FTC vs. Match Group, Inc. and Match Group, LLC.

Jan. 13, 2023

1

Table of Contents

1. Summary of Conclusions

Match is an online dating service established in 1995 with as many as 21.5 million members. The company describes its mission as helping "singles find the kind of relationship they're looking for."[1] Match.com allows members to post photos, written expressions, and relationship preferences to their profile and operates an "anonymous" email network by which members' profile remains private until they confirm a match. The company advertises several subscription packages, including a six month subscription which, prior to mid-2019, featured a "Match Guarantee." Despite these offers, multiple customers have filed complaints about their difficulty and/or inability to cancel their subscriptions. The FTC's complaint calls Match.com's cancellation process "convoluted and confusing;" this is corroborated by statements from Match.com's head of customer service: "it's been the same complaint for the past decade that I've been with Match . . . It takes up to 7 or 8 clicks to complete the flow to turn off [subscriptions] if you can even figure out how to do it."[2, 3]

The FTC asked me to evaluate Match.com's cancellation flow based on the following inquiries:

1. Was Match.com's cancellation process easy to use?

2. Was Match.com's cancellation process easy to find?

I examined the cancellation flow for 2016, 2019, and 2022, documenting changes to password screens, buttons, links, and copywriting. Based on this evidence, I conclude the following:

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[1] https://www.match.com/help/aboutus.aspx?lid=4
[2] 116 - First Amended Complaint.pdf, 20.
[3] MATCH320168_image.pdf

3

Q1: Was Match.com's cancellation process easy to use?

No. Match.com's cancellation procedure was not easy or simple to use.

- The lack of breadcrumb navigation (2022), labeling of steps, and visibility of system status makes it hard for users to know where they are in the cancellation process.

- Inconsistent design and labeling at various steps in the process was confusing.

- The inclusion of extraneous steps, including password authentication and survey questions, introduced unnecessary friction and made the cancellation process longer than necessary and more difficult.

Q2: Was Match.com's cancellation process easy to find?

No. Match.com's cancellation process was not easy for users to locate.

- The discoverability of the cancellation process is buried under indirect settings and language (e.g. "Manage Subscription," "Manage Account").

- Similarly, Match.com's help site buries information about subscription cancellation in their help pages under a "See all articles" link. Upon clicking it, the "Canceling" page appears at the bottom of the help site.

- There is one primary pathway to cancellation; I could locate only one secondary pathway, with the link buried in the help page described above.

In investigating the ease of use and findability of Match.com's cancellation process, I found several forms of dark design patterns including: obstruction ("Roach Motel"), forced action, hidden information, and 'confirmshaming' language. These patterns are harmful in that they block users from leaving an online service, compel users into undesired actions, withhold information, and pressure users through word choice and images. Moreover, I identified several points within

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the cancellation flow that could cause user abandonment, including the password authentication screen and survey steps. The survey, which was not indicated as optional or skippable, was spread over two disconnected pages and featured multiple questions including a Likert scale and open text field. Existing best practices indicate that an appropriate stage to survey users would be in a post-cancellation email or post-cancellation page.

Additionally, I determined that the password screen was arbitrarily placed in the cancellation flow compared to other Account Settings that did not require password authentication. Ultimately, the cancellation flow could have been reduced to four page-steps versus Match.com's eight page-step process.

2. Qualification Statement

I am presently a research fellow at Stanford University, where I focus on topics related to information privacy and artificial intelligence. I obtained my Ph.D. in Information Management and Systems (Information Science) from the University of California, Berkeley School of Information in 2018, with an emphasis in Human-Computer Interaction (HCI), information law and policy, and social computing. Prior to starting my current role in January 2021, I was the Director of Consumer Privacy at the Center for Internet and Society at Stanford Law School. I am an internationally recognized expert on data privacy issues, and I am often a speaker at a wide range of academic, civil society, regulatory, and industry-sponsored conferences and events. Prior to obtaining my Ph.D. and working in the research field, I received a Master of Information Management and Systems (MIMS) degree in 2006, also from the U.C. Berkeley School of

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Information. I also worked for nearly a decade in the Internet software industry, as both a product manager and web producer, where my work encompassed a range of companies and specialties.

A key area of my expertise focuses on how graphical user interfaces are designed in ways that promulgate deception, confusion, coercion, or manipulation of people encountering this content, either through deliberate intent on the part of designers, or through poor design choices. This area of study, commonly called "dark patterns," has exploded in the last five or more years as the presence of dark patterns has become widespread across the commercial internet.[4] This work has been explored by UX practitioners, academic and HCI researchers including Harry Brignull, Arunesh Mathur, Colin M. Gray, whose work is cited throughout this report. Once the province of smaller companies engaged in deceptive, illicit schemes, they have been widely adopted by a range of companies with legitimate business models that nonetheless use dark patterns to impose time-pressured purchase decisions, push consumers to disclose excessive amounts of personal information that they might otherwise prefer not to disclose, or make it difficult for consumers to perform actions such as unsubscribing from paid services.

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[4] See generally: Jamie Luguri, Lior Jacob Strahilevitz, Shining a Light on Dark Patterns, Journal of Legal Analysis, Volume 13, Issue 1, 2021, Pages 43–109, https://doi.org/10.1093/jla/laaa006; Arunesh Mathur, Gunes Acar, Michael J. Friedman, Elena Lucherini, Jonathan Mayer, Marshini Chetty, and Arvind Narayanan. 2019; *Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites.* Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 81; Arunesh Mathur, Jonathan Mayer & Mihir Kshirsagar, *What Makes a Dark Pattern... Dark?: Design Attributes, Normative Considerations, and Measurement Methods*, Proc. 2021 CHI Conf. on Hum. Factors Computing Sys. (2021); Colin M. Gray, Yubo Kou, Bryan Battles, Joseph Hoggatt & Austin L. Toombs, *The Dark (Patterns) Side of UX Design*, 2018 Proc. 2018 CHI Conf. on Hum. Factors Computing Sys., 9–10; Caroline Sinders and Sebastian Rieger, Policy Brief: Dark Patterns - Regulating Digital Design, Stiftung Neue Verantwortung (May 13, 2020), https://www.stiftung-nv.de/en/publication/dark-patterns-regulating-digital-design/; Jennifer King and Adriana Stephan. Regulating Dark Patterns in Practice – Applying the California Privacy Rights Act. Georgetown Technology and Law Review. 5 Geo. L. Tech. Rev. 251 (2021).

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My interest in dark patterns as a research area began with my study of privacy policies and other forms of online disclosures, where I investigated consumer comprehension of policies and disclosures in online and mobile environments, and related issues regarding their design, framing, placement, and content. Based on my research experience, I have consulted as an expert witness on numerous cases related to dark patterns and deceptive design choices since 2009. I have given multiple public presentations on the topic of dark patterns (including participating in a FTC public workshop on the topic), consulted with the California Attorney General's office regarding the use of dark patterns in connection with its landmark privacy law, the California Consumer Privacy Act, and published a law review article on issues related to regulating dark patterns (included in my CV). As of December 2021, along with colleagues at Stanford University's Digital Civil Society Lab, I co-direct the Dark Patterns Tip Line, located at: https://darkpatternstipline.org/. This website is an online resource that continues to expand using submissions of dark patterns from the public.

Attached to this report as Appendix I is my current Curriculum Vitae (CV) with a list of all of my publications, and a list of all of the cases in which I have testified as an expert at trial or by deposition in the past decade under "Litigation Consulting" under Appendix II.

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3. Overview of Method

The method I used to evaluate this matter and form my expert conclusions and opinions are based primarily upon my academic and professional training in Human-Computer Interaction (HCI), original research, and review of related work by other academics and professionals. In this section, I will provide an overview of HCI, the methods I used to render my conclusions and opinions, and specific details about the topic of "dark patterns" and why dark patterns are relevant to this case.

To form my conclusions and opinions in this matter, I conducted my research process as follows:

1. Reviewed amended complaint filed by the FTC.
2. Reviewed screen captures and screenshots of the cancellation flow, public-facing Frequently Asked Questions (FAQ) and other screen captures from Match.com, performed a heuristic analysis, and formed conclusions regarding questions of consumer confusion.
3. Reviewed internal company documents discussing the cancellation flow.

I employed two researchers to assist me with my research and analysis in this matter. I am being compensated at a rate of $450/hr. My compensation in this matter is not contingent on my findings.

A. Introduction to Human-Computer Interaction

Human-Computer Interaction, or HCI, is the study of how humans engage with computer interfaces. HCI is rooted in the field of human factors and ergonomics, which studies how humans interact with the physical world in order to improve the effectiveness, safety, and usability of specialized machines. With the advent of computers, HCI emerged as a field distinct from the study of human factors. In its early days, HCI research was still closely tied to human factors, focusing on the physical aspects of computer use, such as the shape of a keyboard or mouse. After

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command-line interfaces gave way to graphical displays, the field expanded to include a range of topics relating to the visual aspects of computer displays, from human visual perception (how the eye processes sensory data) to human cognition (how the brain interprets and classifies information). As this range suggests, HCI is a broad interdisciplinary field that can include experts from a number of university departments, including computer science, engineering, linguistics, psychology, and information science.[5]

In addition to being an academic field, HCI is also an applied discipline with a strong presence in the private sector. Practitioners drive advances in HCI as much as—if not more than in some areas—academics do, and leading journals such as the Journal of Usability Studies and conferences such as ACM SIGCHI (Conference on Human Factors in Computing Systems)[6] publish work from both private sector practitioners and academics. Many major technology companies employ in-house HCI practitioners, often with titles such as User Experience Designer, Developer, or Researcher, who collaborate with visual designers to develop software and website interfaces. These practitioners are an integral part of the design and development process, and large technology companies typically will not launch online and software products until HCI practitioners have evaluated them. Companies also seek advice from independent HCI consultants.

HCI findings are typically derived from data gathered using both quantitative and qualitative methods, such as: usability inspections, usability tests, focus groups, interviews, examinations of customer feedback (both solicited and unsolicited, e.g., through customer complaints), and other

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[5] https://uxpajournal.org/
[6] https://chi2023.acm.org/

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methods. HCI research has yielded several principles of usability—or heuristics—as well as more domain-specific guidelines that can be applied to evaluate any interface. These principles are important tools for HCI practitioners tasked with evaluating software applications. By evaluating Internet content according to these principles (also called a "usability inspection")—that is, reviewing an application interface for compliance with an accepted set of heuristics—HCI experts can identify common usability problems in an interface. Many of these principles are based on "user-centered design," a concept originated in Don Norman's foundational text *The Design of Everyday Things*, that is employed internationally and embraced by leading websites, design consultants, and user experience/usability professionals[7]. Through a variety of methods, user-centered design seeks to understand application and interface design from the customer's (user's) point of view.

B. Heuristic Analysis Methods

In this case, I used a heuristic evaluation (also called a usability inspection) to evaluate the Match.com interface for conformity with canonical heuristic guidelines and principles created by both academic researchers and professionals (citations made throughout as applied). A heuristic evaluation is made based on HCI principles derived from empirical research and involves the review of a user interface specifically for compliance with these principles, from a visual and information design perspective, as well as assessing the design of the interface and reviewing specific tasks from the user's perspective.[8] This approach can provide similar insights to those generated through user testing without the recruitment of participants. Usability inspections can

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[7] Don Norman, The Design of Everyday Things, Basic Books (1988).
[8] Agnes Deneka, Usability Inspection Methods, Trimble (April 15, 2021), https://modus.trimble.com/news/2021-04-15-usability-inspection-methods/

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be used to examine interfaces prior to launching, or existing interfaces for flaws after they have been launched and put into use, particularly when user feedback or additional testing has identified potential problems. In this report, I limit my analysis to the design of the Match.com subscription cancellation flow within the date ranges of the evidence provided to me (2016 through 2022).

Leading researchers in the field, such as Jakob Nielsen, Ph.D., Professor Ben Schneiderman, Ph.D., Donald Norman, Ph.D., and Bruce Tognazzini have distilled the most fundamental usability principles, for example: "The system should always keep users informed about what is going on, through appropriate feedback within reasonable time."[9] They have also created sets of guidelines that address web design at a more granular level, for example, because people typically scan webpages in an "F-shaped" pattern, it is best to design content in a predictable, easily scannable way to enhance easy readability by using "information-carrying" words and stating the most important information first.[10] This inverted-pyramid method better sustains readership by fronting the most necessary details where users are most likely to see and engage them.[11,12] This report is informed by decades of usability testing and design evaluations conducted by cognitive psychologists and HCI experts.

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[9] Jakob Nielsen, 10 Usability Heuristics for User Interface Design, Nielsen Norman Group (updated Nov. 15, 2020), https://www.nngroup.com/articles/ten-usability-heuristics/; see also Heuristic Evaluations and Expert Reviews, Usability.gov, https://www.usability.gov/how-to-and-tools/methods/heuristic-evaluation.html.

[10] https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content-discovered/

[11] University of Maryland, Baltimore. UMB Website Manual, Best Practices for Web Writing. https://www.umaryland.edu/cpa/toolbox/website-manual/prepare/web-writing/#:~:text=It's%20a%20writing%20style%20where,few%20sentences%20or%20bullet%20points.

[12] Jakob Nielsen, Inverted Pyramids in Cyberspace, Nielsen Norman Group (updated 2015). https://www.nngroup.com/articles/inverted-pyramids-in-cyberspace/

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My analysis of the Match.com cancellation flow focuses on the following aspects most relevant to a usability inspection of disclosures or other information communicated to users by an interface:

- Placement and prominence: A key issue for evaluating whether an individual design feature is effective is its placement on the screen in relation to other elements (e.g., where is it in the visual hierarchy),[13] as well as how prominent it is (e.g. whether it competes with other objects on the screen).[14] Prominence refers to how conspicuous a design feature is in relation to other textual and graphical elements on the page, as well as the grouping and alignment of the items, which provide a visual flow for the user to follow.[15]

- Appearance: Appearance refers to the visual elements of the disclosure, such as font selection, text size, and color.[16] In conjunction with placement and prominence, these elements influence how conspicuous a design element is to the user.

- User Flow Architecture: In order to understand the context in which a choice is presented and the resulting decision(s) a user must make, it is necessary to document the flow, i.e., the steps one must take through the application to arrive at a decision point, and the options available to the user after making a specific choice. By documenting these paths, one can discover potential flaws in how information is presented to users, as well as gain insight into why users take particular actions.[17]

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[13] Jeff Johnson, Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines 2nd Edition (Morgan Kaufmann; 2nd edition (February 24, 2014).

[14] Jenifer Tidwell, Charles Brewer, and Aynne Valencia. *Designing Interfaces, 3rd Edition* (O'Reilly 2019).

[15] *Id.*

[16] Jakob Nielsen *et al.*, *Prioritizing Web Usability* (New Riders 2006).

[17] Louis Rosenfeld *et al.*, *Information Architecture for the Web and Beyond* (O'Reilly 2015).

- System status and feedback: Documenting what the application is telling the user about what is currently happening within the application and what occurs after she makes a decision is crucial for determining if the users understand where they are in a flow, and what their options are.[18] The system status includes task interruptions: instances where the user is interrupted from their primary goal to attend to a completely different task.[19]

- Terminology/Content Strategy: The terms used to communicate choices, system status, and feedback to the users are important for helping them understand system functions. Clear, consistent terminology is essential to user understanding. When there is a mismatch between the terms used by the application and those understood by the users, confusion can result.[20]

- Readability: Users generally scan online text rather than read it thoroughly, and this is particularly true with long paragraphs of text. According to Nielsen, "dense blocks of text are a major turn-off for Web users," suggesting to users that they will have to "work hard to extract the information they want."[21]

- Friction: Design friction refers to "interactions that inhibit people from intuitively and painlessly achieving their goals within a digital interface."[22] A common outcome of design friction is the user exiting or abandoning the task in frustration or confusion. While there are instances of friction that help users, these cases are largely centered around interventions and systems that encourage mindful behavioral change (e.g. keeping a diet

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[18] Nielsen, 10 Usability Heuristics, *supra*; Johnson, *supra* at 131.
[19] Michael Albers, Human-Information Interaction and Technical Communication: Concepts and Frameworks (IGI Global 2012).
[20] Johnson, *supra* at 131.
[21] Nielsen, *Prioritizing Web Usability, supra*.
[22] Victoria Young, Strategic UX: The art of reducing friction. *InfoDesign* (February 13, 2015)

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journal).[23] These examples *do not* forgo the principles listed above or hinder users from completing desired tasks. A designer should aim to *reduce* friction that hinders users from completing desired tasks or causes users to abandon the task (or system) entirely.

The research literature demonstrates that all of these usability aspects—placement, prominence, and appearance—are critical to the effective disclosure of information. These concepts are tied to the visual hierarchy and layout of both graphical and textual elements in an interface. As Tidwell phrases it, "the most important content should stand out the most, and the least important should stand out the least."[24] The point at which a design element is placed in the user flow has a direct impact on whether it is viewed and acted upon. The feedback the system provides to the user about what state the system is currently in, and what the user's options are, has a direct effect on the user's comprehension of a design feature and the actions they can or cannot take as a result. The terminology used to describe an action, as well as its readability on-screen, also impact whether its presentation is effective. Finally, a user interface must minimize (or eliminate) unnecessary friction that prevents the user from achieving her goals. The interface should strike a balance, allowing the user to complete their tasks easily and efficiently while minimizing room for user error.

C. "Dark" Design Patterns

"Dark" design patterns (also called manipulative or deceptive design patterns) are design features that deceive, coerce, or manipulate users into making choices that are either not what users

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[23] Anna L. Cox et al. Design Frictions for Mindful Interactions: The Case for Microboundaries. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16). Association for Computing Machinery, New York, NY, USA, 1389–1397. https://doi.org/10.1145/2851581.2892410
[24] Tidwell, *supra*.

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intended, or are not in their best interests. This report analyzes whether the design of Match.com's

cancellation flow used dark design patterns.

As background, in the visual design literature, design patterns are "reusable/recurring components

which designers use to solve common problems in user interface (UI) design," such as navigation

menus for webpages or mobile devices.[25] Architect Christopher Alexander characterizes design

patterns as well-verified solutions to recurring problems that are *replicable* and *adaptable* to each

designer's case, preferences, and local problem conditions.[26, 27] Design patterns are helpful

hallmarks for designers in answering problems quickly and efficiently; however, some variants of

these patterns routinely work against users' interests. Design patterns are adopted as best practices

based on results from user research and practitioner experience, with an expectation that they

represent a benefit to the user, in terms of efficiency, minimal cognitive burden, or simplicity.

Online interfaces should *reduce* users' cognitive load: "the amount of mental resources that is

required to operate the system."[28] This might be accomplished by designing based on existing

mental models, design layouts, and labeling; or minimizing unhelpful text, images and links.

Thoughtful design reduces unnecessary friction, thus minimizing the amount of energy users have

expend on a task.

Dark patterns are similar sets of recurring design components but are instead optimized for the

benefit of the designer, usually at the direct expense of the user, most commonly in terms of user

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[25] User Interface (UI) Design Patterns, Interaction Design Found., https://www.interaction-design.org/literature/topics/ui-design-patterns/.

[26] Christopher Alexander, A Pattern Language: Towns, Buildings, Construction. Oxford University Press. (1977).

[27] https://www.designsystems.com/christopher-alexander-the-father-of-pattern-language/

[28] Kathryn Whitenton, Minimize Cognitive Load to Maximize Usability. (December 22, 2013). https://www.nngroup.com/articles/minimize-cognitive-load/

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financial loss or an unwanted expenditure of the user's money.[29] Dark patterns may also require

or coerce users to disclose more personal information (violate privacy) or spend more attention or

time (maximize engagement) on a website or feature than users would ideally desire. The term

"dark patterns" was popularly coined in 2010 by designer Harry Brignull, who described them as

"tricks used in websites and apps that make you do things that you didn't mean to, like buying or

signing up for something."[30] More recently, Mathur *et al.* defined dark patterns as user interface

design choices that benefit an online service by coercing, manipulating, or deceiving users into

making unintended and potentially harmful decisions.[31] An emerging literature has grown around

cataloging deceptive retail practices in e-commerce and documenting dark patterns across

additional contexts, such as privacy and online video gaming.[32] In recent years, Harry Brignull has

opted for the term "deceptive design patterns," emphasizing the routine manipulation at play.

These mechanisms can be *replicated* by several online services and *adapted* into their user flows,

depending on the goal of deception. "Dark patterns" or "deceptive design patterns" routinely

hinder users' goals and undermine their choices or individual agency. Collections of examples are

available at Deceptive.design[33], Professor Colin Gray's UXP[2] Lab website[34], and the Dark Patterns

Tip Line[35], the crowdsourced website that I co-manage.

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[29] While "designers" (e.g., visual designers or engineers) may be the individuals who actually implement dark patterns in practice, the term is a proxy for whomever or whatever is benefitting from their use. For a discussion of the user's best interest see Gray 2018. Also, see generally: https://darkpatterns.uxp2.com/ .

[30] Harry Brignull, What are Dark Patterns?, Dark Patterns, https://deceptive.design/.

[31] See: Mathur 2019, 2021.

[32] Mathur 2019.

[33] https://deceptive.design/

[34] https://darkpatterns.uxp2.com/

[35] https://www.darkpatternstipline.org

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While dark patterns can be (and often are) intentionally designed to achieve their outcomes, classifying a design pattern as "dark" or "deceptive" does not require proving a designer's or company's intent to deceive, coerce, or manipulate the user. It is possible to unintentionally create a dark pattern through poor or sloppy design choices or by not testing or evaluating a design pattern either prior or after launch. Inexperience, or lack of familiarity with established design principles and heuristics can also exacerbate the problem. As such, this report identifies several dark patterns in Match.com's service and cancellation flow, including:

- Roach Motel: Brignull describes the "roach motel" as when "the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g. a subscription)."[36] Examples of the "roach motel" pattern include requiring customers to cancel "opt out" subscriptions that were billed to them as a default option, as well as the general disproportionality of making canceling a subscription more difficult than signing up for one, often by requiring the customer to call or online chat with a customer service agent instead of providing a simple online option. Match.com attracts users to their subscription services with Guarantee Extensions and emails from "interested" users.[37] But, as this report discusses, canceling a subscription proves to be a lengthy process, including extraneous steps, such as a password authentication step and multiple pages of survey questions: this process can take *eight* steps.

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[36] Brignull, *supra.*

[37] This fails to differentiate legitimate and fraudulent communications (users who are under review for fake profiles, soliciting, etc.).
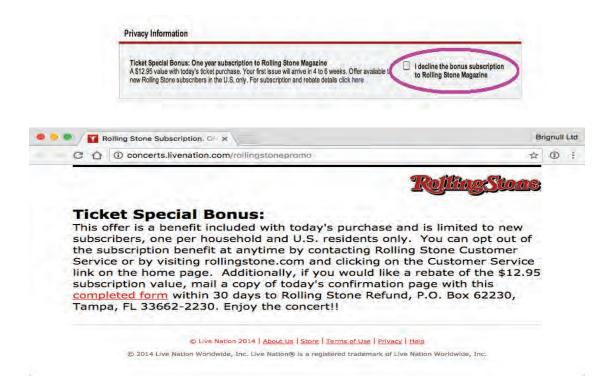
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Figure 1: Example of Rolling Stone's 2014 "Roach Motel" Subscription

Cancellation Process[38]

- Hidden Information: Match.com frequently hides or fails to disclose relevant information

  to users. For example, the survey included in the cancellation process is actually optional:

  it is possible for users to click through the entire process and cancel without providing

  answers. However, this fact is *never stated* during the cancellation process, nor are users

  asked if they want to complete the survey. Moreover, statements such as "Tell us more,"

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[38] Brignull, *supra.*

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and "Before you go, help us make Match.com better" lead users to believe the survey is compulsory.

These patterns are classified under a range of strategies identified to harm or deceive users.[39] "Roach Motel" is an *obstruction* strategy which makes user tasks more difficult than necessary by adding extraneous barriers and excess friction, such as a password authentication step and surveys. "Hidden Information" is an *interface interference* strategy which visually manipulates the interface to reduce discoverability of user-desired options. Finally, "Forced Continuity" is a *sneaking* strategy, intended to delay discovery of important information (including information that would cause users to revoke service if presented earlier).

In addition to the questions of conformance to design heuristics described earlier, this report's analysis draws upon the empirical research literature on dark patterns. This report is framed in this way because while dark patterns do often violate design heuristics, they are not simply isolated issues of poor design by a single company; instead, they fit into the larger instance of dark patterns emerging across multiple sectors of e-commerce companies.[40] However, the mere fact that multiple companies have engaged in this form of deceptive design does not validate its use or diminish its negative effects on users.

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[39] Id.

[40] *See generally:* Caroline Sinders and Sebastian Rieger, Policy Brief: Dark Patterns - Regulating Digital Design, Stiftung Neue Verantwortung (May 13, 2020), https://www.stiftung-nv.de/en/publication/dark-patterns-regulating-digital-design/.

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4. Heuristic Analysis of Match.com's Cancellation Flow

This section presents the findings of my heuristic analysis of Match.com's cancellation flow. As introduced in Section 3, a heuristic analysis is an expert review of an interface for conformance with principles of usability and visual design, as well as an assessment from the user's perspective.[41] I start with a descriptive overview of the Match.com cancellation flow for the three dates for which I was provided evidence: 2016, 2019, and 2020, using 2016 as the starting point, and then contrasting that flow with changes introduced in the following years. Next, I describe my findings from the heuristic analysis. I first analyzed the cancellation flow for its conformance with canonical principles of usability and design. I discuss the areas in which I found the flow violated these principles, as well as practitioner design norms (*e.g.*, common best practices for subscription cancellations). Next, I discuss the specific forms of dark patterns I identified in the cancellation flow. Dark patterns are design patterns that violate principles of usability by taking advantage of common biases in human decision-making to manipulate, mislead, confuse, or deceive users. Relatedly, as mentioned earlier in this report, some instances of dark patterns also can include unnecessary or arduous friction into a design pattern and into a design process. Similar to legitimate design patterns, dark patterns have evolved through their adoption and use by companies and designers to become reusable design components or techniques that create decisional interference that benefits the company or designer at the expense of the user. I found multiple examples of dark patterns in the cancellation flow.

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[41] Jakob Nielsen, How to Conduct a Heuristic Evaluation, Nielsen Norman Group (Nov. 1, 1994), https://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/.

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Part of what makes a dark pattern a dark pattern is its subversion of design patterns; design patterns are "are reusable/recurring components which designers use to solve common problems in user interface design. For example, the breadcrumbs design pattern lets users retrace their steps.[42] Designers can apply them to a broad range of cases, but must adapt each to the specific context of use.[43]" Design patterns are a part of the online digital commons; users are taught through the repeated use of design patterns to build a mental model of how a product functions. It's the subversion of users' expectations with respect to these common design patterns that creates confusion, manipulation, and deception (*i.e.*, dark patterns).

I conclude this section with a summary of these findings and how they work to create a confusing and friction-filled experience for customers. I also examine supporting documentation from Match.com employees discussing issues with the cancellation provided to me by the FTC.

A. Overview of Match.com Cancellation Process

The FTC's amended complaint alleges that Match.com has used a "confusing and cumbersome cancellation process that causes consumers to believe they have canceled their subscriptions when they have not" since at least 2013.[44,45] For my analysis I was provided with recordings and screenshots of the cancellation process from the years 2016, 2019, and 2022. In this section, I will

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[42] Breadcrumbs are "a list of links representing the current page and its "ancestors" (parent page, grandparent page, and so on), typically going all the way back to the site homepage." https://www.nngroup.com/articles/breadcrumbs/
[43] https://www.interaction-design.org/literature/topics/ui-design-patterns
[44] First Amended Complaint, p. 2.
[45] From images in the file MATCHFTC703998, it appears that the cancellation flow screens have been static since at least 2011 based on dates that appear on some screenshots in the file, but given the poor resolution of the images in this file we cannot use it for detailed analysis.

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provide an overview of the cancellation process starting in 2016, and then highlight the changes I observed in 2019 and 2022, calling out the specific concerns I have regarding aspects of the cancellation process that could cause customer confusion. Confusion can manifest in many ways, such as customers abandoning the cancellation process before completion, customers misunderstanding the cancelation process and failing to complete it, and customers who seek other means by which to cancel their accounts due to frustrations with the process.[46] I must note that it appears that the evidence that I have been provided reflects users who had subscribed accounts (rather than customers with free accounts), meaning that there may be steps or menu items that are different for free/non-subscribed users across all three versions I reviewed. All of the evidence I reviewed appeared to be collected on a desktop or laptop computer running Windows; I was not asked to review the cancellation process on a mobile device or operating system, nor to offer an opinion about these processes on mobile devices.

All told, from the initiation step (selecting settings) to the confirmation page, this process typically takes the user at least eight steps:

1. Select Settings icon/click "Settings" link from drop-down menu from Match.com universal site header
2. Land: Account Settings page. Select "Change/Cancel Membership" link.
3. Land: Password entry screen. Enter password and click "Continue Cancellation" button.
4. Land: Page 1 of cancellation flow: Click "Cancel Subscription" from subscription options page.
5. Land: Page 2 of cancellation flow: Survey page S1; click "click "Continue Cancellation" button.
6. Land: Page 3 of cancellation flow: Retention offer; click "No thanks, I want to resign."[47]
7. Land: Page 4 of cancellation flow: Survey page S2; click "Continue Cancellation" button.

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[46] Per screenshots provided to me by the FTC, as well as document MATCHFTC703998, other pathways appear to include online chat (within a specific time window) with a customer service agent, or email correspondence.

[47] It appears that some users may have not received the retention offer page depending upon which survey answer they clicked (i.e., "I met someone). However, I do not have enough evidence to reliably determine how frequently that occurred.

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8. Land: Page 5 of cancellation flow: Cancellation confirmation page.[48]

Table 1: Primary steps in the 2016 Match.com Cancellation Process.

To be clear, these steps do not include any additional tasks presented to users, such as answering all of the survey questions on Pages 2 and 4.

I.   2016 Cancellation Process

The first screen recording of the process provided to me is MATCHFTC761906.mp4, which based on copyright notices viewable on the capture appears to have been recorded in 2016. While some aspects of the site design have changed over time, the core navigation appears to be similar across the years: presumably, accessible from most pages of the website, the universal site header contains an account settings icon (shaped like a gear). When clicked, a submenu appears that contains a link to "Settings;" when clicked, the "Settings" link takes the user to a page entitled "Account Settings." This page consists of eleven account settings-related links, listed in alphabetical order, as well as navigation "breadcrumbs" viewable at the top of the page beneath the main navigation banner and the native ad banner that indicate which page of the Account Settings one was visiting, which is consistent through the remainder of the flow.

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[48] In MATCHFTC703998, which appears to be a guide for customer service agents dated 11/10/2015, the cancellation process is documented as taking 11 steps.
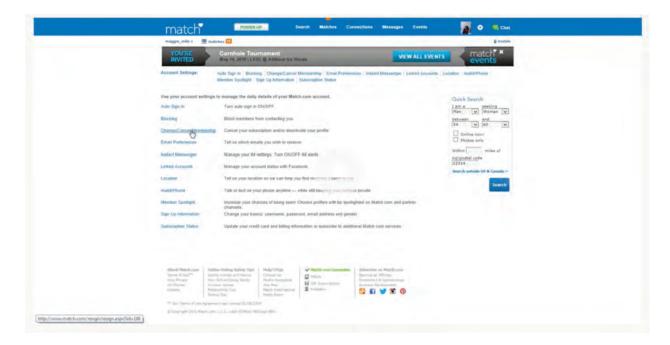
23

Figure 2: 2016 Account Settings Page

On this page, one first can access the "Change/Cancel Membership" link (third item in the list), with the text "Cancel your subscription and/or deactivate your profile," which initiates the cancellation flow. After locating the link, when clicked, the user is shown a password entry screen, which requires the user to enter her password before proceeding in the cancellation flow.
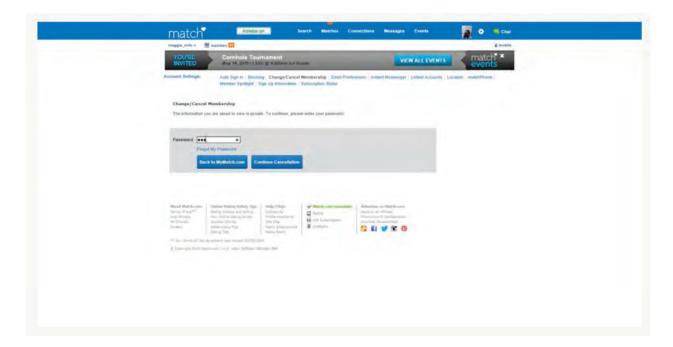
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Figure 3: 2016 Password Authentication Page

The breadcrumbs update to show the "Change/Cancel Membership" link in a non-selectable state to indicate which portion of Account Settings the user is presently visiting. If the user successfully enters her password, she then lands on the first page (Page 1) of the cancellation flow: a subscription options page with three choices: "Subscription Status," "Cancel Subscription" or "Back to MyMatch.com" This page features the first instance of a dark pattern that persists into the 2022 cancellation flow: only the "Back to MyMatch.com" link is rendered as a button, with the same blue button styling present throughout the rest of the cancellation flow. The "Subscription Status" and "Cancel Subscription" links are rendered as blue hyperlinks in text above; their lack of button design makes it harder to spot the "Subscription Status" and "Cancel Subscription" choices.
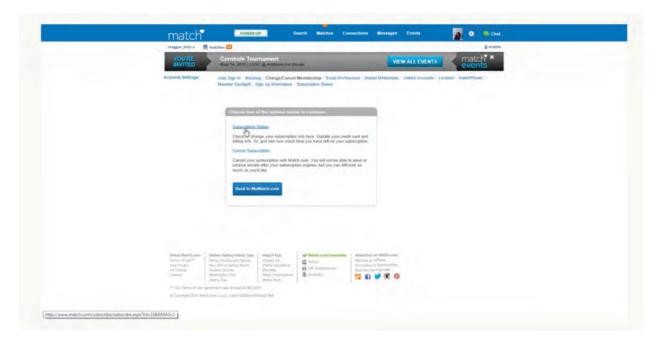
25

Figure 4: Page 1 of the 2016 Cancellation Flow

If the user identifies "Cancel Subscription" as a clickable element and clicks it, she then lands on Page 2 of the flow, which features a survey question beneath the headline, "Before you go, help us make Match.com better." There are eight survey answer options on this page, selectable with a radio button. The survey answers are not indicated as optional, though it is possible based on actions documented in Match Cancellation Process_10-12-2022.wmv that one can simply ignore the survey questions and proceed with the cancellation by clicking the "Continue Cancellation" button beneath the survey answers, which I will discuss later. Selecting any of the answers will auto-generate between one to two additional survey questions, again presented with radio buttons and not indicated as optional, for a minimum of at least four throughout the entire survey portion. Beneath the survey answer options are two buttons, each blue, the left button labeled "Back to MyMatch.com," the right labeled "Continue Cancellation."
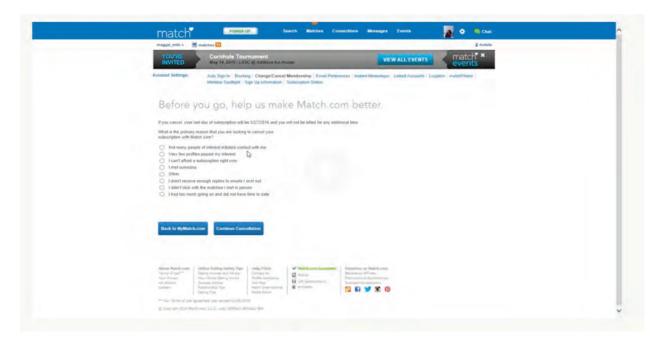
26

Figure 5: Page 2 of the 2016 Cancellation Flow

Once the user clicks the "Continue Cancellation" button, she is taken to Page 3 of the flow, a marketing page, where the user is given a retention offer. In the 2016 version, the options at this stage were "GET 3 MORE MONTHS" (displayed as a blue clickable button) or "No thanks, I want to resign" displayed as a blue text hyperlink. Notably, this button differs from the other buttons in the flow both in shape (oval, versus rectangular), styling (a different, new shade of blue for the background, the shadow which gave the previous button a more '3D' or physical feel is now removed, and a new font style and new darker color for the font and text is also used) and in labeling (using all-caps instead of lowercase). There is also no headline on this page. In order to proceed with cancellation, the user must click the "resign" hyperlink, which lands on a second survey page, entitled "Tell us more." I will discuss the issues with these inconsistencies and the use of the hyperlink below.
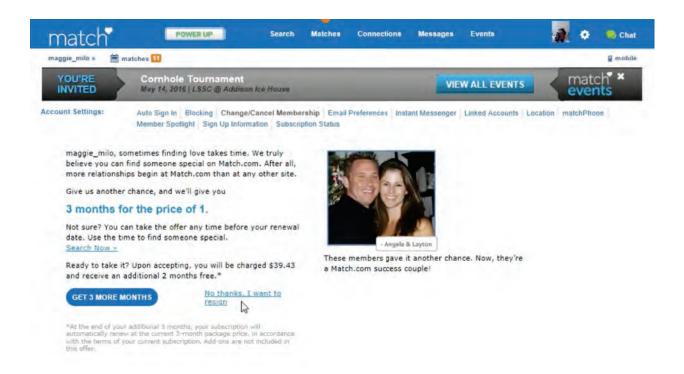
27

Figure 6: Page 3 of the 2016 Cancellation Flow.

On the 2016 version of this next page, the user is presented with the question "In your own words, how can we make finding love easier?," with an open-response text box that allows for the entry of 1000 characters of text. This page now returns to the original design of the cancellation flow, with the buttons changing back to rectangular boxes, the original styling, and original wording. Beneath are two new survey questions, a write in question of "How likely is it that you would recommend Match.com to a friend?," with a Likert-scale survey answer widget underneath it, numbered 1-10, with radio button selectors to pick choices on a scale from "Not Likely" to "Very Likely." Beneath this widget, there is text informing the user of the benefits she will lose by

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canceling.[49] Beneath this are two blue buttons, identical to the buttons on Page 2 of the flow. Clicking "Continue Cancellation" lands the user on Page 4 of the flow, the cancellation confirmation page. This page features a headline, "Your subscription has been canceled.", provides a confirmation number for the user, and indicates the last day the user's subscription will be active.

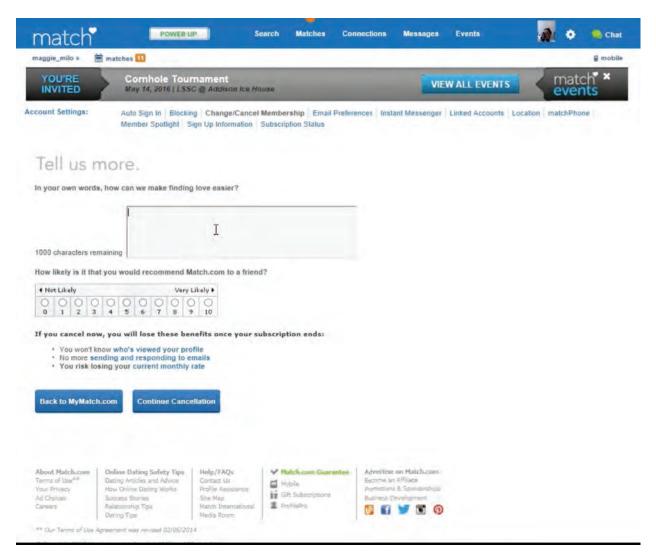
Figure 7: Page 4 of the 2016 Cancellation Flow.

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[49] Each bullet point includes blue text that appears to be hyperlinks, but I did not see video evidence that demonstrated whether these were in fact links, and where they led if clicked.
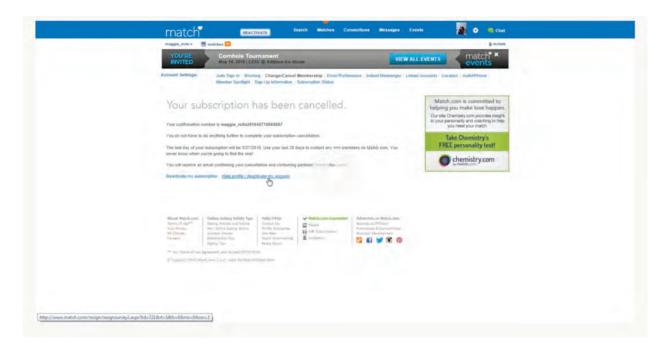
Figure 8: 2016 Cancellation Confirmation Page

II.   2019 Cancellation Process

The next version of the cancellation process for which I was provided documentation is from 2019.[50] In this section, I will review the substantive changes between this version and 2016; the number of primary steps from selecting Settings to the confirmation page remain the same (typically eight steps).

While the look and feel of the Match.com site was updated since 2016, the primary steps and screens remain intact with some substantive changes. The first substantive change is a redesign of Step 3, the password entry screen. While the previous version was primarily text-based and used

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[50] MATCHFTC672309.mp4

the same blue buttons viewable later in the flow (including a "Continue Cancellation" button), the

new version introduces new graphical design elements and includes a CAPTCHA widget, which

if invoked by the system can add an additional step of completing the CAPTCHA image selection

task. This new design element appears to obscure the Account Settings breadcrumbs (navigation

elements) that are still observable on subsequent pages at the top of the page beneath the main

navigation banner and the native ad banner that indicated which page of the Account Settings one

was visiting.
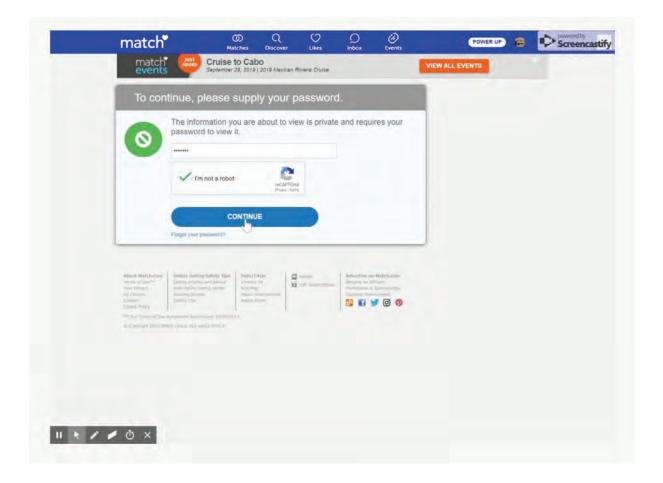
Figure 9: The 2019 Password Authentication page

The second substantive change is on Page 3 of the cancellation flow, the retention offer. Here, the "No thanks, I want to resign" text link has been replaced with a button; now, there are two buttons, the left button with the current offer ("GET 50% OFF 6 MONTHS"), and "CONTINUE CANCELLATION." Again, as in 2016, these buttons are stylistically different from the blue buttons used elsewhere in the cancellation flow.
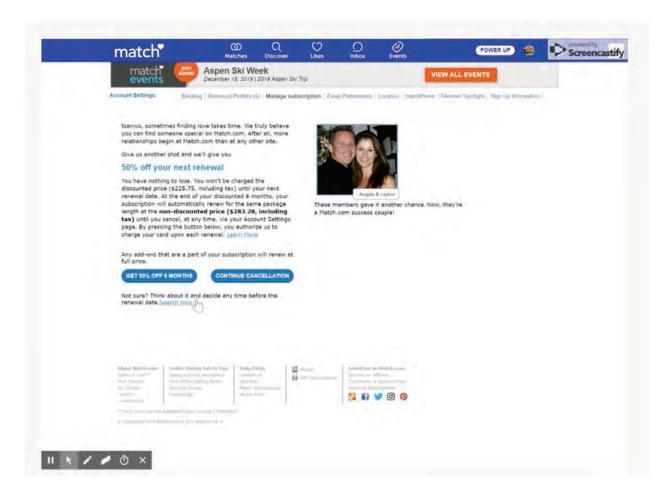

Figure 10: 2019 Retention offer page (Page 3)

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The third substantive change is on Page 4 of the cancellation flow, where the "In your own words, how can we make finding love easier?" question and open-response text box have been removed, leaving the Likert-scale survey answer widget and accompanying question.

III.   2022 Cancellation Process

The final version of the cancellation process for which I was provided documentation is dated 2022.[51] In this version, the Match.com website's visual style has undergone additional updating; The Account Settings page is redesigned, with eight menu options instead of the previous eleven. The "Change/Cancel Membership" has been removed; "Manage Account" is the replacement, first in the list, with a "Manage Subscription" link beneath. The breadcrumb-style navigation has been replaced by a split-screen design with the menu options running along the left side of the screen. While these options appear to be persistent for some of the menu items, when one clicks the "Manage Subscription" link, this split-screen design disappears and subsequent pages in the flow lack either breadcrumbs or the split-screen menu items.

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[51]MATCHFTC672321.wmv; Match Cancellation Process_10-12-2022.wmv.

Figure 11: 2022 Account Settings page

B. Analysis of Cancellation Process

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The FTC's amended complaint alleges that the cancellation process "causes consumers to believe they have canceled their subscriptions when they have not." Upon reviewing the multiple iterations of this cancellation process, I believe this conclusion is supported by both the website evidence and the company documents I reviewed: the cancellation process caused substantial confusion for many consumers. Additionally, I expect that some customers found the cancellation flow frustrating enough, or were stymied by the password authentication step, that they were compelled to contact Match.com's customer service in order to cancel their subscriptions, which could add additional time or complexity to the process. In this section, I review the factors that I believe caused this confusion.

I.   Violation of Usability Heuristics

The Match.com cancellation flow across the three versions I reviewed violates several of the principles of website usability, as proposed and refined by Dr. Jakob Nielsen,[52] in a manner that could lead to customer confusion. The issues I review here are compounding, meaning that any single one in isolation may not have been enough to cause substantial confusion, but additively working in tandem, all contribute to a lack of clarity about how to successfully cancel one's Match.com account.

a.   Visibility of System Status

Nielsen defines this principle as: "The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time." I observed a violation

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[52] Jakob Nielsen. "10 Usability Heuristics for User Interface Design." Nielsen Norman Group, April 24, 1994 (Updated Nov. 15, 2020). https://www.nngroup.com/articles/ten-usability-heuristics/. Based on: Nielsen, J. (1994). Enhancing the explanatory power of usability heuristics. Proc. ACM CHI'94 Conf. (Boston, MA, April 24-28), 152-158.

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of this principle in the cancellation process from a lack of consistent signaling to the user each step in the cancellation process and her present place within those steps. While the 2016 and 2019 versions use breadcrumb navigation to indicate to users that they remained in the cancellation flow throughout the process, breadcrumbs were eliminated in the 2022 version I reviewed. However, the existence of breadcrumbs alone aren't necessarily a guarantee that all users will clearly understand the current step they are in, especially given a lack of labeling of steps in the cancellation process across all versions. All versions lack a simple, clear label (e.g., "Step 3 of 5," "Page 4 of 6") indicating to users precisely where they are in the process, and this is not a problem that breadcrumbs alone can solve. The only other signal is the presence of a "Continue Cancellation" button on most, but not all, pages. The elimination of breadcrumbs from the 2022 version, coupled with a lack of discrete steps, means that a user can be several steps into the laborious cancellation process and struggle to understand what remains, or whether they are still in the cancellation process at all given its inconsistency. I will discuss this in more detail below.

b.   Consistency and Standards

Nielsen describes consistency as: "Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions." The Match.com cancellation process violates this principle in several ways. The primary example is on Page 3, the retention offer page. Across the three versions of the flow, this page stands out for its inconsistency with the pages before and after it; it appears to be using a different stylesheet to render the buttons on the page, which are designed and labeled differently from the other pages, as it also lacks a page title. The experience is such that it appears to be an advertisement inserted into the cancellation process, rather than an actual step in the process itself. As a consequence,

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some users may have become confused and assumed that they had left the cancellation process when arriving on this page, abandoning the flow.

The lack of "Continue Cancellation" button on the 2016 version of this page (Figure 6) is also egregious, especially given the use of such a button the preceding and anteceding pages as the only means of signaling continuity in the process; the use of a text link and the "resign" language undoubtedly caused substantial confusion to consumers, which I will discuss in more depth later in this report. I see this mixing of links and buttons on page 1 (Figure 4) as well, where the primary tasks on this page (Subscription Status and Cancel Subscription) are links that could easily be confused as headers, while the only button on the page (the primary call to action) takes the user back to MyMatch.com. Another consistency issue, which I will expand upon later, is the use of password authentication for access to the subscription cancellation flow. Beyond the initial website sign-in, which Match.com customers may have been able to stay signed-in to their accounts for extended periods of time, it does not appear from my review of the evidence that any other portion of the website after the user initially logged in required password authentication other than the subscription cancellation flow. The arbitrary placement of a password authentication mechanism at this specific point, and not at other points on the website where sensitive information could be accessed and changed without the account holder's knowledge, suggests that the password authentication was placed at this point as an obstacle for users to access the cancellation flow. (I discuss the password authentication step in more detail below.)

   c. Aesthetic and Minimalist Design

Finally, Nielsen describes this final principle as: "Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the

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relevant units of information and diminishes their relative visibility." The Match.com cancellation

process violates this principle by inserting extraneous, unnecessary steps, making it far longer than

necessary and subjecting its users to excess interactions that increase their cognitive load and

makes it more likely that users will abandon their task mid-flow. The insertion of both the survey

flow, as well as the retention offer, directly into the cancellation flow adds extraneous, unnecessary

information and steps that could have easily been placed after the completion of the cancellation

step, or designed in a way that could have been less taxing.

Another way the cancellation flow violates this principle is through introducing excess *friction* to

the flow, which causes excessive cognitive load for users. As discussed in Section 3B. Heuristic

Analysis, friction refers to "interactions that inhibit people from intuitively and painlessly

achieving their goals within a digital interface." Other experts have noted how some elongated

flows create friction, for example in this paper analyzing unnecessary friction in cookie banner

consent design: "While two different screens may not seem frictive (increasing friction), this flow

is a dark pattern because of the lack of cues within the user interface to show the user which choices

they have made, combined with a multi-step process."[53] There is a similar kind of friction/frictive

element present in the Match.com cancellation flows; various expert best practices for cancellation

flows have recommended making surveys optional,[54,55] not forcing users to fill out a survey to

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[53]https://www.gmfus.org/sites/default/files/Sinders%2520-
%2520Design%2520and%2520Information%2520Policy%2520Goals.pdf
[54]https://www.campaignmonitor.com/blog/email-marketing/find-out-reasons-for-unsubscribing-with-a-quick-exit-survey/
[55] https://medium.com/@the_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f

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unsubscribe[56,57] and to create very short, one question surveys.[58,59]   Design expert Luke Wroblewski, in his work on forms and similar multi-step processes, notes that "[t]o keep people focused on completing a form, you also should consider which Web site elements help illuminate a clear path to completion and which elements distract from it…[r]emoving interface elements not directly related to completing a form helps keep people on task and removes paths to abandonment."[60] By inserting 2-3 additional steps on new pages, as well as adding a password authentication step, Match.com increased friction and created barriers to the cancellation process, breaking established cancellation and design flow norms as argued in this section and above.

II. Dark Patterns in the Cancellation Process

In addition to violating the design principles described above, I found several examples of dark patterns in the cancellation process. In this section I will review each type of dark pattern observed, where I identified it in the process, and when. It is important to note that dark patterns are not

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[56] https://medium.com/@the_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f
[57] https://www.litmus.com/blog/the-dos-and-donts-of-unsubscribes/
[58]https://ux.stackexchange.com/questions/17054/should-survey-for-canceling-subscription-be-before-or-after-the-subscription-is
[59] https://mailchimp.com/en-gb/help/edit-or-remove-the-unsubscribe-reason-survey/
[60] Luke Wroblewski. Web Form Design: Filling in the Blanks. Rosenfeld Media: 2008.

Dark patterns on this page
1. This retention offer reads as an ad, and is different from the previous cancellation flow (this is a form of dark pattern called "Obstruction.")
2. Different design, layout and copy
3. Buttons change design in shape
4. Buttons change color
5. Buttons change copy
6. One button is removed; one button is left that reads "Get 3 More Months"
7. "I want to resign" is hyperlink (the use of a hyperlink instead of button is a documented dark pattern called "Denied Choice")
8. "I want to resign" does not say cancel; confusing language
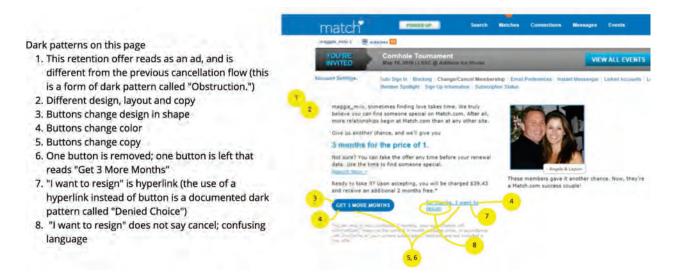
Figure 12: Identification of dark patterns on the 2016 retention offer (Page 3)

mutually exclusive; a feature (e.g., the survey in the cancellation flow) may utilize more than one dark pattern in its design.

a.   Obstruction

Obstruction is defined as "Making a process more difficult than it needs to be, with the intent of dissuading certain action(s)."[61] Brignull identifies a specific form of obstruction, the "roach motel," where "the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g. a subscription)."[62] Obstruction can also be described as the inappropriate use of friction, as I discussed earlier, where additional steps or features require additional effort by users, increasing cognitive load, time spent, and making it difficult, if not impossible, for some users to complete the process. Obstruction was used throughout the entire

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[61] Gray 2018, Mathur 2019.
[62] Brignull, *supra.*

cancellation process, making it longer and more complex than needed, and contributing to user confusion and task abandonment. I observed it at the following points:

- The password authentication requirement at the start of the process. As I discuss in more detail later in this section, this authentication screen appears to have been arbitrarily placed at this point in the flow. Given the comparative lack of risk to the user of a negative impact from an adversary accessing the account for this function as compared to other account functions that were not restricted by authentication, it is difficult to justify why password authentication was necessary at this step. Based on literature from computer security experts and practitioners, the context in which Match.com deploys password authentication bars users from accessing settings on their account that should be readily available.

- The inclusion of survey questions in the process. As I discussed above, peppering survey questions throughout the flow, as well as not indicating that the questions are optional, is a violation of cancellation best practices. A more appropriate point for Match.com to survey its customers would be on the cancellation confirmation page, or in a post-cancellation email, and to make it clearly optional. The inclusion of the survey questions throughout the cancellation flow wastes users' time and increases their cognitive load.

- Inconsistent design throughout the process. As I discussed earlier, the lack of consistency in design throughout the flow makes it difficult for users to understand where they are in the cancellation process and what steps are required in order to complete it. This was particularly apparent on Page 3, the retention offer page.

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b. Forced Action

Forced action is the practice of "requiring the user to perform a certain action to access (or continue to access) certain functionality."[63] What makes an action forced is that there is weak, or zero, justification for the user to take the action; the point is to make the action egregious or laborious enough to disincentivize the user to complete their task. Forced action (as well as obstruction) can enable forced continuity by making it difficult to impossible for users to accomplish the goal of canceling a subscription.

There are multiple examples of forced action in the cancellation process:

- The password authentication page: as discussed earlier and in more detail later in this section, the password authentication step appears arbitrarily placed in relation to other options with access to vulnerable information. Users who did not remember their passwords were prevented from accessing the cancellation flow until they found or reset their passwords. This requirement introduces delay into the process, which can vary by user and the complexity of the password reset process, though among less sophisticated users the process of resetting a password could introduce significant delays and thus prevent them from returning to the cancellation task.

- Inserting survey questions on pages 2 and 4: again, because it was not obvious to users that the survey questions were optional, users were likely to believe that they were required to answer these questions in order to proceed with cancellation. The use of radio buttons as the interaction mechanism reinforces this expectation, as radio buttons are typically presented as an element that must be filled out and selected before moving forward in the

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[63] Gray 2018.

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user flow (a practice that is appropriate for surveys in other contexts where a user **must** fill out each question to get to the end of survey). That nearly every option on page 2 spawned additional questions after selecting an initial response likely led many users to believe they had to answer every question asked of them. This feature also introduces uncertainty—how many new questions will continue to spawn after every answer I select? The dread of possibly spawning more and more questions presents a significant disincentive from continuing the cancellation flow. Again, these multiple questions, instead of one question, breaks the norm of cancellation flows. The open text response field on page 4 of the 2016 version of the flow would also have posed a challenge for users who were inexperienced with such questions or for whom writing responses was a challenge. This field also included a character count (maximum 1000), that some users could misinterpret as a requirement rather than a limit, or as a required number of words rather than characters. Combined with the lack of signaling regarding the number of steps required for users to cancel across all years of the flow I analyzed, the prospect of being forced to answer multiple survey questions across multiple pages would have negatively impacted the experience for many users and led to their abandoning the cancellation flow.

  c. Hidden Information

Match.com frequently hides or fails to disclose relevant information to users. Hidden information is defined as "options or actions relevant to the user but not made immediately or readily accessible."[64] I observed at least two examples of hidden information:

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[64] Gray 2018.

- <u>Representing the optional surveys are required:</u> the survey questions presented on Page 2 (Survey S1) and Page 4 (Survey s2) appear required but are actually optional. It is possible for users to click through the pages and cancel without providing any answers. However, this fact is *never stated or signaled* in the cancellation process, nor are users asked if they want to complete a survey. Moreover, statements such as "Before you go, help us make Match.com better" and "Tell us more" would lead some users to believe the survey is compulsory or necessary for cancellation.[65] Later, I compare Match.com's user flow to Facebook Dating, which presents its survey as optional and bypassable with the inclusion of a "Skip" text button. As mentioned above, design experts have recommended cancellation surveys be optional; users should be notified, either using language or design, that the survey they are filling out is optional, which Match.com failed to do.

- <u>Findability of cancelation process:</u> finding the means to cancel on the website was not a simple task. There appears to be a single pathway to start the process (as outlined in Table 1), which means that failure rates could be high if users did not discover it.[66] While the placement of the gear icon in the universal header adheres to accepted design practices, the use of the term "settings" in the drop-down menu is ambiguous and required exploration by users to encounter the Account Settings option; then, on the Account Settings page, there is no mention of cancellation, but instead the term "Manage Subscription," which again doesn't mention cancellation: "Update your membership and/or deactivate your

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[65] While some users may have felt compelled to click through the process to "submit" the survey, others may have found the use of the "Before you go" language on Page 2 (Survey S1) confusing to the point of suggesting that this page was the "final" cancellation page, and that Page 3 was an optional retention offer that didn't require clickthrough. Please see Section 4.II.D.2, "Confusing Terminology," for details. It is important to note that these interpretations are not mutually exclusive; both pose possibility for user confusion.

[66] There is a link within the Canceling help page that appears to deposit the user at the password authentication stage of the cancelation process. I have not observed any other direct links to the process in the materials I reviewed.

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profile" in 2019 and earlier, "Manage Account" and then "Manage Subscription" on the 2022 version. Furthermore, the site's help pages also buried information about membership cancellation; the Manage My Subscription help page doesn't display the "Canceling" page unless the user clicks on a "See all articles" link, which then displays the full list of articles with "Canceling" at the very bottom. The help page also directs the user to the online process, and does not suggest that users contact an agent except in the context of canceling a free trial.

d.   Content Strategy

The software product design process does not just consist of user research, engineering, or user experience (UX) design/graphic design. It also includes content strategy and copywriting. Content strategy and copywriting refer to the actual language and word choices within a software application (app) or product. Words, names and descriptors are as intentional, and planned as the design and coding of the app itself. It is crucial to analyze the language used within the Match.com cancellation flow in order to understand how it contributed to any user confusion, along with the frequency of the language/naming of the particular cancellation copy/content strategy choices and descriptions and the design and interaction patterns changes. All of these language choices (the content strategy and copywriting of the cancellation user flow) contributed to user confusion within the cancellation flow. I must emphasize that while the following section just focuses on content strategy, all of the below examples also coincided with graphical user interface changes, and these changes must be viewed together to understand the wider impact of the dark patterns and confusing elements within Match.com's cancellation flow. The following paragraphs will focus specifically on the content strategy choices made by Match.com from 2016-2022.

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1. Inconsistent Language

As mentioned earlier throughout this report, consistency is not only a tenet of good design,[67] it is

a practice taught to designers, technologists and product managers. Consistency refers not just to

consistent design choices, but also content strategy and copywriting, including use of language,

voice, tone, and word choices. Consistency refers to internal consistency for employees and

external consistency for users.[68] From 2016-2022, Match.com used inconsistent language

throughout the cancellation process, particularly on page 3, the 'retention offer page' (Figure 6

for 2016, Figure 10 for 2019, Figure 13 for 2022). As highlighted above, the retention offer page

from 2016-2022 changes visual design, UX design (page layout) and content strategy and

copywriting design (language choices, tone and voice, etc.). Starting with 2016, the retention offer

page shifts in tone and voice from the page previous, switching from third person to first person.

Nowhere in the cancellation flow to this point has the "I" voice been used, but between page 2 and

page 3 the button choices change from "Back to MyMatch.com" and "Continue Cancellation" to

"Get 3 More Months" and the "No thanks, I want to resign" link.

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[67] Nielsen 1994.
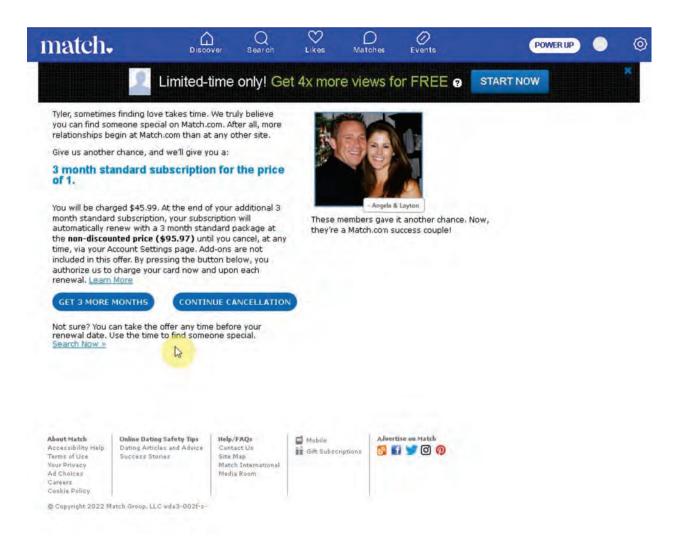[68] https://uxdesign.cc/design-principle-consistency-6b0cf7e7339f

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Figure 13: Retention Offer from 2022, Match Cancellation Process_10-12-2022.wmv

The 2019 process features two different retention offer pages with one flow in 2019, captured from F01-MG-0028904.webm, that shows the retention offer page uses "Continue" instead of "Continue Cancellation." Previous pages from F01-MG-0028904.webm use "Continue Cancellation," with the retention offer page switching to "Continue" with previous and subsequent pages switching back to "Continue Cancellation." However, the other flow from 2019, captured from MATCHFTC672309.mp4, and documented in 2022, show the retention offer page, has changed to include "Continue Cancellation" as a button, which is consistent, but the rest of the copy, design

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and images on the retention offer page is still similar, if not identical, to 2016, which again demonstrates a discontinuity in tone from the preceding and following pages. The copy on the retention offer page is similar to an ad, or coupon, and while it does mention cancellation, its tone shifts from survey style language to friendly ad copy, and then back to the survey tone on the following page.

Shifts in tone are forms of inconsistency; certain parts of a website, such as the landing page, might use a more personalized or friendly voice for new and returning users, while other parts of a website, such as a cancellation flow or a sign up flow, might use more general, and straightforward language. Specifically, different tones can signal different actions, or different parts of a website or product. Shifting tones within a specific flow, such as signing up or canceling, breaks 'consistency' and leads to confusion; for example, did the user accidentally click somewhere on the navigation and exit the flow they were in, or did they accidentally click on an ad? Consistent content strategy helps guide, ground, and place a user in a process, particularly as they are actively navigating a process, such as changing a feature or setting, or removing or deleting content or subscriptions. Relatedly, the kind of tone and language used by the retention offer page, which is different from the tone and language used in the rest of the cancellation flow, is an example of a dark pattern as 'confirmshaming.' Confirmshaming is defined as: "the act of guilting the user into opting in to something. The option to decline is worded in such a way as to shame the user into compliance. The most common use is to get a user to sign up for a mailing list, and it is often found in exit intent modals and other popups."[69] Other experts describe 'confirmshaming' as "using

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[69] https://www.deceptive.design/types/confirmshaming

language and emotion (shame) to steer users away from making a certain choice."[70] For example,

delish.com, an online food and lifestyle service, offers users to sign up for their email list; the

option to decline ("No thanks, I'll have a microwave dinner tonight") is framed as inferior and

undesirable compared to the option to accept ("Show Me 14 Simple Dinners").[71]
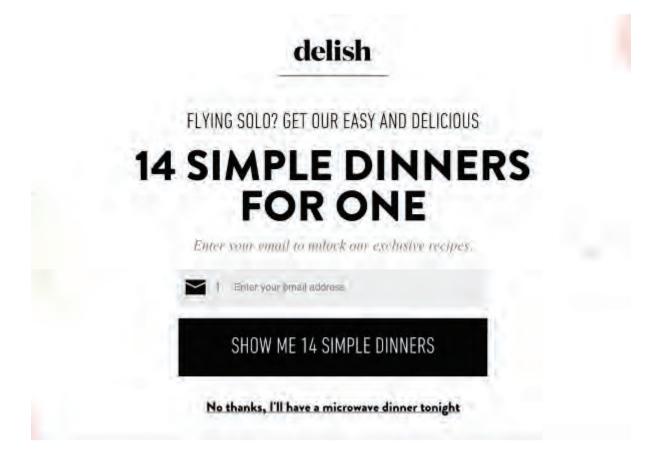
Figure 14: Delish.com using Partial Language to Discourage "Opt-Outs"

Based on Figure 6 (Page 3 of the 2016 Cancellation Flow), Match.com also used a dark pattern

called "confirmshaming" in their retention offer: "[User Name], sometimes finding love takes

time. We truly believe you can find someone special on Match.com. After all, more relationships

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[70] https://arxiv.org/pdf/1907.07032.pdf

[71]Eric Shroeder, "UX Dark Patterns: Manipulinks and Confirmshaming." *UX Booth.* (June 4th, 2019). https://www.uxbooth.com/articles/ux-dark-patterns-manipulinks-and-confirmshaming/

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begin at Match.com than any other website. Give us another shot and we'll give you _____ off your renewal."[72] Additionally, an image of a couple is shown with the caption: "These members gave it another chance. Now they are a Match.com success couple!" The presentation of a 'successful couple' is questionable as a user may be canceling their subscription for any number of reasons, including having established a 'successful' relationship since starting Match.com. The usage of the confirmshaming along with the abrupt tonal shift from the rest of the cancellation flow, only heightens the inconsistent language which in turn can add to user confusion. Match.com's own employees also appear to have found similarly; in document MATCHFTC320168_image.pdf, page 1 notes that employees described the 2016 flow's verbiage as 'inconsistent' and the retention offer as 'misleading.'

2.   Confusing Terminology

As mentioned above, Match.com repeatedly used inconsistent language and tone across the cancellation process. But the company also used confusing terms (copy) throughout the cancellation process as well. For example, in 2016, on the retention offer page, Match.com uses the phrase "No thanks, I want to resign." Prior to this page, the cancellation flow has not used 'resign' at all, but instead has used 'cancel', 'cancellation' and 'canceling.' Match.com employees have referred to the cancellation process as 'resignation process' and have highlighted the flow itself is confusing to users.[73] The use of the term "resignation" in the retention offer leads to further confusion for users, as it has never been used in the cancellation process until this point, and is not used again on subsequent pages. A review of screenshots of the Match.com help pages provided

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[72] MATCHFTC761906.mp4; Please note that the renewal offer is '3 months for the price of one' instead of a percentage off. All of the other documentation mentions 3 months for the price of one or 50% in their retention offer.
[73] MATCHFTC519412.pdf

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to me by the FTC also does not include the term "resignation" throughout. While resignation is what Match.com internally refers to as 'cancellation', this is new language for users, and the word choice, coupled with the shift in tone and use of first person "I", adds to further confusion.

As mentioned above, in one version of the 2019 flow,[74] Match.com's retention offer uses "Continue" instead of "Continue Cancellation." In this instance, 'Continue' creates ambiguity: what, exactly, is being continued? Does clicking 'Continue' kickstart the retention offer and not cancellation, or does 'Continue' continue the cancellation process? By switching the buttons' naming conventions, along with the changes on this specific retention offer page, it creates confusion as to what task is being continued.

Another confusing example involves Page 2 of the cancellation flow (Figure 5), the first survey page. The headline on this page, "Before you go, help us make Match.com better" may have misled some users to believe that this was the final step in the cancellation process. The use of the term "before you go" makes it sound as if the user has already completed the process, and that the survey questions on this page were in fact a post-cancellation survey. Because this page was followed by the retention page, which appeared more like an ad than a clear step in the cancellation process, some users may have believed upon arriving on Page 3 that the cancellation process was complete, and dropped out at that point, when in fact in order to complete the cancellation they were compelled to click through Page 3.

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[74] F01-MG-0028904.webm

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III. The Password Authentication Screen

In this section, I review the use of the password authentication screen in depth. As discussed above, the password authentication screen was used as: a source of increased friction to make cancellation more difficult to access; to obstruct users from accomplishing the cancellation task; and as a form of forced action, by requiring users to complete a task unnecessary or unconnected from their primary goal (subscription cancellation). But because password authentication does have a critical and appropriate use, in this section I will review the appropriate justification for password authentication, and provide an analysis of what made Match's use of it in this flow *inappropriate*.

a.   Password Friction: Balancing Users' Security and Ease of Access

A persistent problem in HCI and user studies is the counterbalance between privacy, security, and ease of use. This is most evident in the provision of password checks: sign-in or verification points at various points in the user flow. The contextual placement of these log-in points can cause undue friction, which leads to site hopping, reduced conversions, and task abandonment.[75] Password checks, failed attempts to reset passwords and account lockouts cause users to forgo online purchases.[76] In a study where over half of participants relied on social logins (sign-ins via connected social media platforms such as Facebook), half of participants were prone to abandon a website if asked to provide a password.[77] The lack of ease in these interactions can compromise the password check's original goal. In the same study, 12% of participants produced a "variation of an old password" and 2% defaulted to their previous password; 48% participants admitted they

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[75] Young, *supra.*

[76] "The Current State of Checkout UX-18 Common Pitfalls & Best Practices," Baymard Institute. https://baymard.com/blog/current-state-of-checkout-ux

[77] "Are Password Resets Costing Your Company?" Beyond Identity Blog, December 17, 2021. https://www.beyondidentity.com/blog/password-resets-and-the-consumer-journey

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were very likely to abandon the site if they were explicitly told they could not use prior passwords. Evidently, password friction stifles users, yielding inferior or similar passwords, or causing user drop-off altogether.

The password authentication requirement for Match.com users attempting to manage their subscriptions may be described as a "pain point:" a hurdle or obstacle that decreases the quality of customer experience.[78] It is particularly obstructive because it appears that Match.com users could remain signed-in to their accounts for extended periods of time without receiving a password prompt, as well as access other account settings that posed a greater risk directly to the user if they were compromised, such as editing one's name, email address, and password.[79] It appears the greatest risk posed by accessing the "Change/Cancel Membership" setting is to the company, who may experience higher cancellation levels through ease of access. This obstruction qualifies as an *interaction-level* pain point, in which the user experiences navigation difficulty regarding a product or service; as well as a *relationship-level* pain point, in which the user questions the quality of service by the service provider.[80] Pain points can deter users from task completion by increasing their cognitive load. Several financial institutions have set guidelines to mitigate customer dissatisfaction with online subscription practices. For example, major card companies mandate that online merchants notify customers upgrading their free trials to paid subscriptions prior to

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[78] Sarah Gibbons, Three Levels of Pain Points in Customer Experience. Nielsen Norman Group. (May 16, 2021). https://www.nngroup.com/articles/pain-points/

[79] Based upon evidence provided to me, it appears that when a user is signed into her account, the only point at which she would receive the password authentication screen was during the cancellation flow. I do not have knowledge of how long a user could remain signed in to their Match.com account before being asked to reauthenticate. However, it is common for many websites to allow users to remain signed-in for extended periods of time given how burdensome users can find password authentication.

[80] Gibbons, *supra*; Achonwa Alvan, What are pain points in design? Educative. https://www.educative.io/answers/what-are-pain-points-in-design

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charges, as well as provide "clearer instructions about how to cancel."[81] Additionally, Visa prescribes that customers "must be able to cancel their subscription online with the merchant, without needing to contact the merchant through another channel (e.g. a phone call)."[82]

These pain points are validated by work communications between Match.com employees. As of February 24, 2016, Match.com's staff noted: "Also, the majority of members drop out when asked to re-enter their password so I'm not sure if they think they canceled, or if they were just clicking the button for the heck of it."[83] As early as June 05, 2013, Match.com staff indicated:

> "We need to take a look at our resignation flow…Currently the flow is very convoluted and confusing. We get a lot of customer care complaints about it. I want to see if there's a way to clean up the flow, yet optimize it so we can try to save as many people from resigning as possible. If we can plug the hole where people are leaving the site, it can help with our PMC goals."[84]

We have identified relevant security design principles and practices to evaluate the ease of Match.com's cancellation. According to the *principle of psychological acceptability:* "security mechanisms should not make the resource more difficult to access than if the security mechanisms were not present."[85] Desired resources should not be barred by security checks, and if they are, the

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[81] Alex Glaser, Customers fight surprise charges as online subscription surge. NBC News, December 23, 2020. https://www.nbcnews.com/business/business-news/customers-fight-surprise-charges-online-subscriptions-surge-n1252149

[82] Visa Business News, "Reminder: Updated Policy for Subscription Merchants Offering Free Trials or Introductory Promotions." https://usa.visa.com/dam/VCOM/global/support-legal/documents/subscription-policy-vbn-visa-public.pdf (September 26, 2019).

[83] MATCHFTC320168_image.pdf.

[84] MATCHFTC417535.pdf.

[85] Matt Bishop, *Computer Security: Art and Science*. Chapter 13: Design Principles, Page 348. Boston, MA: Addison-Wesley, 2003.

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principle indicates that the burden imposed onto users in passing these checks must be *minimal* and *reasonable*. From the evidence aforementioned, I question whether the security check at the point of membership cancellation is reasonable for users, given Match.com allows users to remain logged-in for extended periods of time. In addition, I challenge the placement of the password screen in contrast to other account settings.

In the evidence reviewed, I did not observe the password screen invoked at any other point in any of the videos during various iterations of website usage.[86] In documents depicting the "Account Settings" from 2016 and 2019, the "Change/Cancel Membership" setting is the only one requiring a password—although several other settings could feasibly put the user's account security and integrity at greater risk from an adversary having unauthorized access to a legitimate account. Specifically, in the video Match Cancellation Process_10-12-2022.wmv, the user repeatedly clicks "back to home" and then proceeds through the flow clicking on multiple settings, then returns to the "Change/Cancel Membership" setting and is not required to authenticate again. This breaks the flow Match.com has introduced with the requirement of password authentication. With this break in the security pattern, it appears that the use of the password by Match.com is not a security measure, but one designed to create friction; if this was a choice motivated by security concerns, why does the site not require the user to sign in repeatedly each time they selected "Change/Cancel Membership"? To be clear, I am not recommending this behavior, but instead highlighting an inconsistency in the design flow. If this authentication step were truly a security feature, it would be consistent in terms of when the user has to sign in, such as upon returning to the home page. But instead, the password is not consistently required, and thus is a questionable security measure.

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[86] I assume in all the videos I reviewed that the user had already logged into the website at some point prior to the recording session.

I conclude that the presentation of the password screen during the cancellation process is arbitrarily placed compared to other account settings. Match.com's cancellation flow, in regard to its password friction, does not satisfy the *principle of psychological acceptability.* The placement of the password screen fails to be reasonable or minimal; obstructs user access unnecessarily; and deters legitimate users from resources on their account that should be readily accessible.

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5. Conclusion: Putting the Heuristic Analysis into Perspective

This analysis demonstrates that the Match.com cancellation flow was neither easy to find nor easy to use throughout the entire timespan of my analysis. I mapped the evolution of the cancellation flow from the years 2016, 2019, and 2022. I marked introductions and changes to password screens, buttons, links, and copywriting. Based on this evolution, I concluded the following:

1. The cancellation flow fails to make visible what stage in the process users are in (see "Visibility of System Status").

2. The process suffers from inconsistent design, terminology and language, thus confusing users (see "Consistency and Standards").

3. Extraneous steps slow down the cancellation process. Password screens, surveys, and retention offers introduce unnecessary friction into the user journey (see "Aesthetic and Minimalist Design").

While Match.com can, at their discretion, implement password checks, offer retention deals, and survey users, it is the *placement* of these items within the cancellation process that makes it difficult for users to complete. There are better placements for these items that do not obstruct the cancellation process.
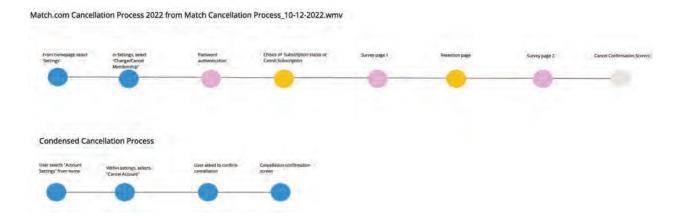
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Match.com Cancellation Process 2022 from Match Cancellation Process_10-12-2022.wmv

Figure 15: A comparison of the existing cancellation process as compared to a condensed process

The inclusion of these extraneous steps increased the length of the flow by at least four steps, as Figure 15 demonstrates above. As a comparison, I created a condensed cancellation process consisting of the following steps:

1. From home page, select Account Settings;

2. Within the Account Settings, select "Cancel Account";

3. Confirm cancellation;

4. Receive cancellation confirmation.

In this section, I will conclude my analysis first by drawing upon evidence provided to me by the FTC of internal discussions by Match.com employees about the cancellation flow, which can provide context for the problems I identified. Second, I will briefly talk about the larger landscape of concerns with dark patterns in subscription cancellations, focusing on practices by Match.com competitors, and then reviewing the larger policy context in which dark patterns are a focus of subscription cancellations.

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A. Evidence from Company Documents

After concluding my heuristic analysis of the website, I reviewed internal company documents provided to me by the FTC. I found that the documents supported the conclusions I have drawn in this report. Multiple documents validated the existence of customer complaints regarding Match.com's cancellation flow. There is evidence in the documents I reviewed that Match.com employees were aware that the cancellation process is problematic, with one employee noting in 2016 that "honestly it's been the same complaint for the past decade that I've been with Match ... it takes up to 7 or 8 clicks to complete the flow to turn off AR . . . even if you can figure out how to do it. Also, the majority of members drop out when asked to re-enter their password."[87] One exchange with customer support personnel, from 2015, highlights user abandonment with the retention page in particular: "The cancel/resign flow is like 5 steps. Many times the users think once they click "resign" that they are done. They're not, they have to click through the nag screens. Michele complained about this for years, but Product would not reduce the resign steps. It's not a bug. It's a feature."[88]

Another exchange from 2016 highlights that employees understood that "customers complain that they cancel and we still auto renew them," suggesting the survey was problematic, that there was confusing language, and that "there is no doubt that the resignation flow is extraneous and potentially confusing."[89] A technical resolutions supervisor, also in 2016, discussed in a long email memo that as of May they had already had over 1K complaints, and "[w]e believe we can make

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[87] MATCH320168_image.pdf
[88] MATCHFTC519412.pdf
[89] MATCH543542.pdf

this process easier for our members who are already wanting to cancel (they've made it to the flow) but get stuck on survey pages, retention offers, etc and believe they canceled . . . by shortening the flow, we could make sure members who are wanting to cancel and who are already in the cancel the flow are able to complete cancellation successfully."[90] In another, employees offered the following: "I want to see if there's a way to clean up the flow, yet optimize it so we can try to save as many people from resigning as possible. If we can plug the hole where people are leaving the site, it can help with our PMC goals."[91]

One aspect of the process that the internal documents illuminate is the arbitrariness of the password authentication step. Despite wide-ranging conversations about issues with the cancellation process, there is no mention of a security issue requiring password authentication. In fact, one presentation discussing the cancellation process documented the steps with this note: "Enter Password (Why?)".[92] One staff member indicated that "the majority of members drop out when asked to re-enter their password so I'm not sure if they think they canceled, or if they were just clicking the button for the heck of it."[93] From this communication, it is evident that the password screen caused users to flee the cancellation procedure without a clear understanding of their cancellation status. When reviewing Match.com's *proposed* solutions to this problem, I found that one solution did not require password entry at all.[94] Instead, it notifies users of the 6-month subscription renewal date and chargeable amount, and provides three checkbox options: "Turn off automatic billing,"

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[90] MATCH464887.pdf
[91] MATCHFTC417535.pdf, *supra.*
[92] MATCHFTC543666.pdf
[93] MATCHFTC320168_image.pdf, *supra.*
[94] MATCH491446.pdf

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"Hide profile," and "Permanently delete account." A blue, rounded "Save Changes" button and a "Help" link accompany the three options. The proposed solution is followed by a caption:

> "Proposed cancellation flow does not require re-entry of password, and provides simple and descriptive options for the member to choose from. Sometimes members just want to prevent future billing, and sometimes they want their account "removed" entirely. Once the "save changes" button is pressed, the member will see a cancel confirmation page and have the option to complete a survey."

The proposed solution is clearer and more concise than the eight page/step cancellation flow. The most profound takeaway is that a cancellation flow without password authentication had the potential to simplify the customer journey. Moreover, this pitch pushes the survey form to *after* the cancel confirmation page and makes it *optional.* This solution was not implemented in the documents I received.

In addition to the password authentication issue, there are several documents proposing changes to the overall process to address customer dissatisfaction. The cost of hidden information becomes clear; in MATCHFTC543666, a PowerPoint presentation, Slide 2 notes that "We spend over $1M per year to handle related Care contacts," and that "Over half of member help searches are related to just 10 of our 400 FAQs. Guess what they're related to—cancellations."[95] Another email exchange from 2014 appears to document cancellation flow abandonment from the password page at a discrete moment in time (documenting a 80% click-through rate to the password authentication

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[95] MATCHFTC543666.pdf

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page, and then a dramatic 6% click-through rate to following page, which appeared to be the retention offer at this stage in time, a drop of approximately 94% from the first page where the calculations were made).[96] Proposed changes, in addition to those described above in relation to password authentication, included shortening the overall process down to seven steps,[97] and moving the survey to a post-cancelation step.[98]

Finally, it is important to note that while this evidence demonstrates that some employees quantified the cost to the company of customers' need to contact customer service to cancel their accounts, their accounting does not capture the costs accrued by the customer in excess of any additional direct costs from uncancelled subscriptions, such as time spent trying to find another means to cancel, time invested in contacting and working with an agent to execute the cancellation process, and any frustration experienced from this process. These are harms attached to the dark patterns we described in Section 4.B.II.

B. Competitor Practices

For comparison purposes, I conducted a heuristic analysis of two competitor websites that are not owned by Match.com's parent company: Facebook Dating and Coffee Meets Bagel, and their cancellation processes.[99] Below, I have attached a visualization of the cancellation process. Yellow represents the element of dark pattern(s) and pink represents frictions. Each step starts after the

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[96] MATCHFTC312903.pdf
[97] Id.
[98] Id., MATCHFTC491442.
[99] Note that these reviews were conducted on the mobile versions of these services.

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user has already found their settings (omitting the click for the user to get to their settings page). Coffee Meets Bagel had four steps with one step being friction-filled; a survey that was not marked optional. Facebook Dating has two different flows, one with a user able to 'skip' a survey, and one where a user completes out the survey. The Facebook 'skip' survey flow has three steps and no friction, but the flow with survey has four steps, with two survey pages.

However, the shortest version of the Match.com cancellation flow is from 2022,[100] which has four steps and apparently no retention offer page if the user selects the survey choice indicating that they have met someone. All other Match.com choices yield six steps within the cancellation, meaning the shortest Match.com flow is still the longest option of the competitors analyzed. Additionally, Match.com was the only product that had dark patterns and frictions in their user cancellation flows, in comparison to Facebook Dating and Coffee Meets Bagel. Relatedly, Match.com had each of the frictions from all of the Facebook Dating and Coffee Meets Bagel flows. Match.com's flow had more friction and more dark patterns, than the two other competitors analyzed for this report.
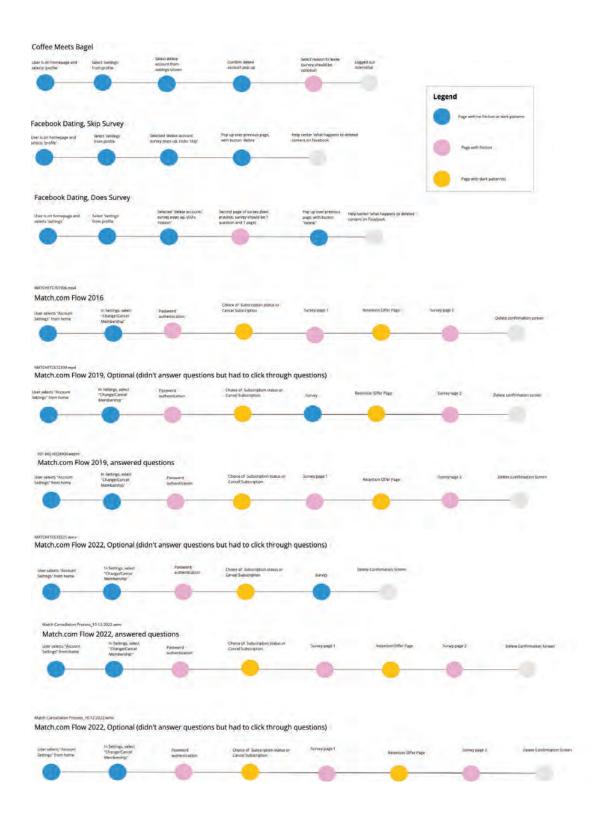
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[100] MATCHFTC672321.wmv

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Figure 16: Comparison of cancellation flows between Match.com, Coffee Meets Bagel, and Facebook Dating

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C. Conclusion

In conclusion, based on the evidence I have reviewed, I find the Match.com cancellation process neither easy to find nor easy to use, but instead plagued by noncompliance with design heuristics and dark patterns. Furthermore, the evidence I have reviewed demonstrates that the company was aware of these problems for potentially for a decade-plus, and yet chose not to address them. The result of these problems was to make it difficult, if not impossible, for many Match.com users to cancel their subscriptions using the online cancellation process, with many believing that they had canceled their subscriptions when in fact, they had not, thus accruing additional charges. Based on the documents I reviewed, it appears that many customers had to find other routes to contact the company outside the online cancellation process, but that those methods were also difficult to locate, and required additional and disproportionate investments of time by customers.

The analysis and opinions contained in this report are based on information available as of the date of the report. I reserve the right to supplement or amend this report should any additional information become available including, but not limited to, any expert reports submitted on behalf of defendants, deposition transcripts, and other information unavailable as of the date of this report.

I understand that this report may be used in a law enforcement proceeding. Pursuant to 28 USC Section 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

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/S/

Jennifer King, Ph.D

January 13, 2023

Berkeley, California

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Appendix I: Dr. King's CV

Jennifer King, Ph.D, MIMS

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415-990-8227

Research Summary

I am an information scientist whose research sits at the intersection of human-computer interaction and public policy. My specific research focus is information privacy how the public makes choices about their personal data in the context of their relationships with institutional actors, how the design of technology impacts these decisions, and how legal and policy infrastructures impact these choices. I use both quantitative and qualitative methods to examine these issues, focusing both on the role of interface design as well as social structure on individual decision-making.

Present Role

Privacy and Data Policy Fellow, Stanford Institute for Human Centered Artificial Intelligence Jan. 2021-present
At HAI I conduct information privacy research with a specific focus on artificial intelligence, as well as work with Professors Sarah Billington and James Landay on a research project examining the impact of sensors used in workplace environments to promote health and well-being. In this role I also engage with and advise policymakers, legislators, and governmental entities on issues related to information privacy, as well as collaborate with HAI colleagues on promoting interdisciplinary policy-focused research at Stanford. Co-instructed the National Research Cloud policy practicum with Professor Dan Ho and HAI Director of Policy Russell Wald in winter/spring 2021.

Education

University of California, Berkeley School of Information
Ph.D, Information Management and Systems 2009 – May 2018

- My dissertation, "Privacy and Social Exchange Theory," used a social relational framework to explore consumer motivations for disclosing personal information to companies. I employed both qualitative and experimental methods for this research. It was selected as the runner up in the Information Schools (I-Schools) Organization's 2019 Best Dissertation Award. Dissertation advisors: Deirdre Mulligan, Coye Cheshire, Steve Weber, and David Wagner.
- Focus areas: human-computer interaction, social computing, and information law and policy.
- Research funded by grants from the Center for Long Term Cybersecurity (inaugural grantee), the National Science Foundation through TRUST (Team for Research Through Ubiquitous Secure Technology) and the I3P (Institute for Information Infrastructure Protection).
- Co-director of the student led Center for Technology, Society & Policy for the 2016-2017 academic year. CTSP funds fellows and projects, organizes events, and hosts speakers supporting our four focus areas: engineering ethics, digital citizenship, evaluating technology policy, and supporting future technologists.

University of California, Berkeley, Masters of Information Management and Systems (MIMS) 2006

University of California, Irvine, B.A., Political Science (Honors) and Sociology 1994

Professional and Research Experience

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Director of Consumer Privacy, Center for Internet and Society, Stanford Law School   April 2018-Dec. 2020

In this role I conducted privacy-focused research in the public interest on topics such as genetic privacy, the Internet of Things, notice and consent, and artificial intelligence. I actively participated in the management of the Center, including strategic planning for research and fundraising. I also engaged with and advised policymakers, legislators, and governmental entities on issues related to information privacy.

Co-Director, Center for Technology, Society & Policy, UC Berkeley   Aug. 2016 – July 2017

Co-director of the student led CTSP for the 2016-2017 academic year. CTSP funds fellows and projects, organizes events, and hosts speakers supporting our four focus areas: engineering ethics, digital citizenship, evaluating technology policy, and supporting future technologists.

Contract Litigation Consultant/Expert Witness   2010 – present

I provided expert services to clients (Federal Trade Commission, Federal Reserve Board, State of Washington, City of Santa Monica, City of Santa Cruz, and others) focusing on online disclosures, negative option continuity programs, online credibility, deception, and general website usability issues.

Major Cases include:

- Testifying Expert, FTC vs. Amazon (2:14-cv-01038-JCC). I completed an expert report, rebuttal report, and was deposed. My expert report provided a heuristic analysis of the in-app purchase process as well as an analysis of thousands of customer complaints. The case was decided on summary judgment in favor of the FTC, finding Amazon liable for unauthorized in-app purchases by children on the Kindle Fire tablet.
- Testifying Expert, FTC vs. Commerce Planet (8:09-cv-01324-CJC(RNBx)). I completed an expert report, rebuttal report, was deposed, and testified at trial. The substance of my report was a heuristic evaluation of a portion of the Commerce Planet website to determine the clarity and conspicuousness of negative option marketing disclosures to consumers. The case resulted in a permanent injunction, restitution, and disgorgement against the defendant for deceptive and unfair practices violating Section 5(a) of the FTC Act.

Research Specialist, Samuelson Law, Technology, & Public Policy Clinic, U.C.B. Law, Berkeley, CA   2007-2009

- Utilized information science, social sciences, and experience in technology development and human-computer interaction to perform empirical research and develop policy recommendations focused on privacy issues with Internet technologies, ubiquitous computing and sensor networks, including RFID and video surveillance systems.

Paranoid Yahoo!, Yahoo! Data Security (Paranoid) Team (contract), Sunnyvale, CA   2006

- The Paranoid team worked to protect the privacy and integrity of Yahoo! user data worldwide.
- Developed strategic initiatives to combat password "phishing" threats for Yahoo! Users.
- Evaluated internal and external applications for data privacy and integrity threats, developing applications and internal policy.

Researcher, Electronic Frontier Foundation, San Francisco, CA   2005

- Investigated privacy policies governing user data on major search engines and privacy issues related to radio frequency identification (RFID) for EFF, a non-profit group that advocates for Internet civil rights, privacy, and free speech.

Customer Trust Product Manager, **Yahoo! Community Services**, Sunnyvale, CA   3.03 – 7.04

- The Customer Trust Manager role was a new position created on the Product Management team to combat abuse and illegal uses of Community properties, and to be an advocate for Yahoo! customers. This was one of the first Trust & Safety roles in the industry.
- Developed strategic and tactical Community anti-abuse initiatives, and evangelized these efforts across the company, working closely with legal, policy, data security, and various product teams.
- Focused on investigating deviant and anti-social users of Community products, and performed an extensive qualitative and quantitative analysis of a criminal user population to create policies and build software tools for

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content moderation in order to curb their usage of the service; this effort decreased their content contributions to Yahoo! by over 80%.

Associate Product Manager, **Yahoo! Personals**, Sunnyvale, CA   9.02 – 3.03

- Managed feature development from conception to completion, working with marketing, interaction and visual design, web development, engineering, and quality assurance teams.
- Drove development of front-end and back-end features, including video greetings, direct marketing programs, and internal customer care tools.
- Led the creation of anti-fraud initiatives, increasing customer retention and recapturing over $4M in annual revenue.

Senior Producer, Kaplan Tech West, a subsidiary of Kaplan, Inc. Oakland, CA   10.00 – 9.02

- Kaplan Inc. is an international educational services company. Kaplan Tech West was Kaplan's primary software development team, charged with building an online distance-learning platform.
- Oversaw end-to-end development of the learning platform's XML-based content authoring system, including requirements gathering, usability testing and evaluation, interface design, and user training.
- Performed a detailed semantic analysis of Kaplan instructional content, and worked with data architects to refine models for encoding Kaplan content in XML.

Producer, **Desktop.com**, San Francisco, CA   7.00 – 10.00

- Created new applications for Desktop's Internet-based computer desktop product, performed market research and analysis of key competitors, and designed interface improvements to existing applications.

Assistant Producer, Productopia.com, San Francisco, CA   5.99 – 7.00

Peer Reviewed Journal and Conference Papers

Mulligan, D.K., Regan, P.M. and **King, J**. (2020), The Fertile Dark Matter of Privacy takes on the Dark Patterns of Surveillance. J. Consum. Psychol., 30: 767-773. https://doi-org/10.1002/jcpy.1190

Jennifer King. 2019. "Becoming Part of Something Bigger": Direct to Consumer Genetic Testing, Privacy, and Personal Disclosure. Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 158 (November 2019), 33 pages. https://doi.org/10.1145/3359260

Christopher Thompson, Maritza Johnson, Serge Egelman, David Wagner, and **Jennifer King**. "When It's Better to Ask Forgiveness than Get Permission: Attribution Mechanisms for Smartphone Resources." Presented at the Symposium on Usable Privacy and Security, July 2013. Newcastle, UK.

Jennifer King, Airi Lampinen, and Alex Smolen. "Privacy: Is There An App For That?" Presented at the Symposium on Usable Privacy and Security, July 2011. Pittsburgh, PA.

King, Jennifer and Selcugoklu, Aylin. "Where's the Beep? User Misunderstandings of RFID." In Proceedings of 2011 IEEE International Conference on RFID.

M. Meingast, **J. King**, D. Mulligan. "Embedded RFID and Everyday Things: A Case Study of the Security and Privacy Risks of the U.S. e-Passport." In Proceedings of IEEE International Conference on RFID, March 2007.

M. Meingast, **J. King**, D. Mulligan. "Security and Privacy Risks of Embedded RFID in Everyday Things: the e-Passport and Beyond," *Journal of Communications*, 2(7), 2007.

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Law Review Articles and Refereed Workshop Publications

Jennifer King and Adriana Stephan. Regulating Dark Patterns in Practice – Applying the California Privacy Rights Act. Georgetown Technology and Law Review. 5 Geo. L. Tech. Rev. 251 (2021).

Jennifer King, Richmond Wong, Rena Coen, Jael Makagon, and Andreas Katsanevas. "This All Seemed Fairly Normal To Me"   The Absence of Effect of Privacy Policy Links on Invasive Personal Disclosure. Presented at the Privacy Law Scholars Conference (invitation only), May 2019, Berkeley, CA.

Jennifer King, "Privacy, Disclosure, and Social Exchange Theory." UC Berkeley dissertation, filed May 2018. A draft of this work was presented at the Privacy Law Scholars Conference (invitation only), June 2015, Berkeley, CA.

Jennifer King, "Understanding Privacy Decision-Making Using Social Exchange Theory." Presented at The Future of Networked Privacy: Challenges and Opportunities workshop, CSCW March 2015.

Jennifer King. "Taken Out of Context: An Empirical Analysis of Westin's Privacy Scale." Presented at the Workshop on Privacy Personas and Segmentation (PPS) at SOUPS, July 2014. Menlo Park, CA, USA.

Deirdre K. Mulligan and **Jennifer King**. "Bridging the Gap Between Privacy and Design." University of Pennsylvania Journal of Constitutional Law, Vol. 14, Issue 4, 2012. Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2012.

Jennifer King. "How Come I'm Allowing Strangers To Go Through My Phone?: Smartphones And Privacy Expectations." Presented at the Workshop on Usable Privacy and Security for Mobile Devices (U-PriSM) at SOUPS, July 2012. Washington, D.C., USA. Note: This paper was also presented at the Privacy Law Scholars Conference (invitation only), June 2012, Washington, D.C., USA. Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2012.

Jennifer King and Deirdre K. Mulligan. "Reconceptualizing Privacy for Social Media Research and Design." Presented at *Reconciling Privacy with Social Media* workshop, CSCW, 2012.

Jennifer King and Andrew McDiarmid. "Where's The Beep? Security, Privacy, and User Misunderstandings of RFID." In proceedings of USENIX Usability, Security, and Psychology. San Francisco, CA, April 14, 2008. Available at: http://portal.acm.org/citation.cfm?id=1387652

Egelman, Serge, **King, Jen**, Miller, Robert C., Ragouzis, Nick, and Shehan, Erika. "Security User Studies: Methodologies and Best Practices." Extended abstracts of the ACM Conference on Human Factors in Computing Systems (CHI 2007). San Jose, CA, USA, April 28, 2007.

Research Reports and White Papers

Daniel Ho, **Jennifer King**, Russell Wald, and Chris Wan. Building A National AI Research Resource: A Blueprint for A National Research Cloud. White Paper: Stanford Institute for Human-Centered Artificial Intelligence, October 2021. Available at: https://hai.stanford.edu/policy/national-research-cloud

King, Jennifer; Flanagan, Anne; Warren, Sheila. Redesigning Data Privacy: Reimagining Notice & Consent for Human-Technology Interaction. White paper report: World Economic Forum, 30 July 2020. Available at: https://www.weforum.org/reports/redesigning-data-privacy-reimagining-notice-consent-for-humantechnology-interaction.

Hoofnagle, Chris; **King, Jennifer**; Li, Su; and Turow, Joseph. "How Different are Young Adults from Older Adults When it Comes to Information Privacy Attitudes and Policies?" April 14, 2010. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1589864. Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2010.

Turow, Joseph; **King, Jennifer**; Hoofnagle, Chris; Bleakley, Amy; and Hennessey, Michael. "Americans Reject Tailored Advertising and the Three Activities That Enable It." September 29, 2009. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1478214

Jennifer King, Deirdre Mulligan, and Steven Raphael. "CITRIS Report: An Evaluation of the Effectiveness of the City of San Francisco's Community Safety Cameras." Presented before the City of San Francisco Police Commission, January 2009. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2183381

Chris Jay Hoofnagle and **Jennifer King**. "Research Report: What Californians Understand About Privacy Online." September 3, 2008. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1262130

Chris Jay Hoofnagle and **Jennifer King**. "Research Report: What Californians Understand About Privacy Offline." May 15, 2008. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1133075

Jennifer King and Chris Jay Hoofnagle, "A Supermajority of Californians Support Limits on Law Enforcement Access to Cell Phone Location Information," February 2008. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1137988

Chris Jay Hoofnagle and **Jennifer King**. "Consumer Information Sharing: Where The Sun Still Don't Shine," December 2007. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1137990

Op-Eds and Popular Press

Jennifer King. "A Bill Designed to Protect Kids Could Change the Internet for the Better." Tech Policy Press, September 15, 2022.

Jennifer King and Eli MacKinnon. "Do the DMA and DSA Have What It Takes to Take on Dark Patterns." Tech Policy Press, June 23, 2022.

Jennifer King. "Opinion: After Rape Survivor's Arrest, It's Time To Rethink Genetic Databases." *The Washington Post*, Feb. 17, 2022.

Jennifer King and Jael Makagon. "The fallacy behind private surveillance cameras in San Francisco." *Cal Matters*, August 9, 2020.

Jen King. "Change your phone settings so Apple, Google can't track your movements." *The Conversation*, Jan. 14, 2019.

Invited Talks & Panels

Regulating Artificial Intelligence Through Data Protection. Global Privacy Assembly, Keynote Speaker, October 18, 2021.

Bringing Dark Patterns To Light–An FTC Workshop. Panelist, April 29, 2021.

App. 1046

Dark Patterns, Icons and Toggles: A Conversation on Design and Regulation. IAPP Global Summit, April 23, 2021. (panelist)

Dark Patterns: Manipulative UX Design and the Role of Regulation. Future of Privacy Forum, March 24, 2021. (main presenter)

The Rise of Trust Brokers. World Economic Forum Sustainable Development Impact Summit, Sept. 24, 2020.

"Notice, Consent, and Disclosure in Times of Crisis." Atlantic Council Data Salon Series, May 27, 2020.

"Integrating Privacy, Personal Disclosure, and Social Exchange Theory: An Experimental Test." Ostrom Workshop Colloquium, Indiana University, Bloomington, IN, October 21, 2019.

The Trust Paradox: The Future of Privacy and Transparency in the Digital Economy (panel). The Churchill Club, San Mateo, CA, March 29, 2019.

"The Cambridge Analytica Debacle," International Association of Defense Counsel, Santa Barbara, CA, February 27, 2019.

"Privacy, Anonymity, and Consent." Conference On Mobile Position Awareness Systems and Solutions, San Francisco, CA, Sept. 7, 2018.

Data Privacy Day (panel), World Economic Forum Center for the Fourth Industrial Revolution, San Francisco, CA, June 5, 2018.

Designing Trustable Products: Microinteractions Matter For Secure UX (panel). O'Reilly Design Conference, March 22, 2017.

Security & Human Behavior, Harvard Law School, May 2016.

TRUSTe Internet of Things Privacy Summit, June 17, 2015. Panelist, "Enabling Smart Cities: Planning for Privacy."

In Short – Advertising and Privacy Disclosures for a Digital World. Federal Trade Commission workshop, May 30, 2012. – Opening speaker and panelist.

How To Personalize Without Being Creepy. SXSW Interactive – March 14, 2011. Austin, TX. – Panelist.

"A Supermajority of Californians Support Limits on Law Enforcement Access to Cell Phone Location Information," given at the 37th Research Conference on Communication, Information and Internet Policy (TPRC), September 26, 2008, George Mason University, Alexandria, VA.

"Where's the Beep? Security, Privacy, and User Misunderstandings of RFID," given at "Pay On The Go: Consumers and Contactless Payment," Federal Trade Commission Town Hall Meeting, July 24, 2008, University of Washington, Seattle, WA. – Panelist.

"The State of CCTV in the United States," given at the 3rd Annual Surveillance and Society Conference "InVisibilities: The Practice and Experience of Surveillance in Everyday Life," April 3, 2008, University of Sheffield, Sheffield, England, UK.

"CCTV: Developing Privacy Best Practices," Department of Homeland Security Workshop, December 17-18, 2007, Alexandria, VA. – Panelist

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App. 1047

"Sensors as Disruptive Technology: Guidelines for Future Development," given at the IBM Sensor Day, October 2007, UC Berkeley, Berkeley, CA.

 "Embedded RFID and Everyday Things: A Case Study of the Security and Privacy Risks of the U.S. e-Passport," given at the IEEE International Conference on RFID, March 2007, Grapevine, TX.

 "RFID: A Case Study of the Risks and Benefits of Location-Aware Technologies," given at the O'Reilly Emerging Technology Conference, March 8, 2006, San Diego, CA.

Awards, Honors and Service
Awards:
Best Dissertation Award, Runner-Up: Information Schools (I-Schools) Organization, 2019
Selected leading paper, Future of Privacy Forum's Annual Privacy Papers for Policy Makers Award, 2012 (two papers) and 2010. *This Award recognizes leading privacy scholarship that is relevant to policymakers in the United States Congress, at U.S. federal agencies and for data protection authorities abroad.*
UC Berkeley School of Information Dr. James R. Chen Award for Outstanding Master's Final Project "Social Uses of Communication Backchannels in a Shared Physical Space," 2006.

Public Service:
        Committee Member, California State Advisory Board on Mobile Privacy Policies, 2012
Member, State of California RFID Advisory Board, 10.07 – 3.08

        Leadership Roles (Conferences and Workshops):
        Program Committee*, Symposium on Usable Privacy and Security,* 2020
        Organizer, *Redesigning Consent for Better Data Protection*, Oct. 2-3, 2019. Co-hosted with the World
        Economic Forum Center for the Fourth Industrial Revolution, San Francisco, CA
Program Organizer, *Workshop on Privacy Indicators* and *The Future of Privacy Indicators Workshop*, SOUPS, June 2016
Program Organizer, *Bridging the Gap Between Privacy by Design and Privacy in Practice*, CHI, May 2016
Program Organizer, *Privacy By Design: Privacy Enabling Design*, Computing Community Consortium, May 2015
        Program Organizer, *Security User Studies: Methodologies and Best Practices*, CHI Workshop, 2007
Committee Member, Privacy & Power: Acknowledging the Importance of Privacy Design for Vulnerable Populations , CHI Workshop, 2020
Committee Member, *Ubiquitous Privacy: Research and Design for Mobile and IoT Platforms*,
        CSCW Workshop, 2019
Committee Member, The Future of Networked Privacy: Challenges and Opportunities, CSCW Workshop, 2015
        Committee Member, *Measuring Networked Privacy*, CSCW Workshop, 2013

        Conference & Journal Reviewing:
        CSCW: 2019, 2017, 2016, 2015, 2013
        International Workshop on Privacy Engineering – IWPE 2016
        CHI: 2020, 2019, 2018, 2014
        IEEE RFID 2012

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Appendix II: List of all cases Dr. King was deposed or testified at trial

Dr. Jen King, Testifying Roles and Depositions as of Jan. 2023

<u>Testifying Roles:</u>

- 2012: FTC vs. Commerce Planet (8:09-cv-01324-CJC(RNBx))

<u>Depositions:</u>

- 2022: State of Arizona vs. Google (CV 2020-006219)
- 2022: Washington D.C. vs. Instacart (2020 CA 003777 B)
- 2015: FTC vs. Amazon (2:14-cv-01038-JCC)

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EXHIBIT 59

Redacted in its Entirety

(Filed Under Seal Pursuant to Protective Order Regarding Confidential Materials)